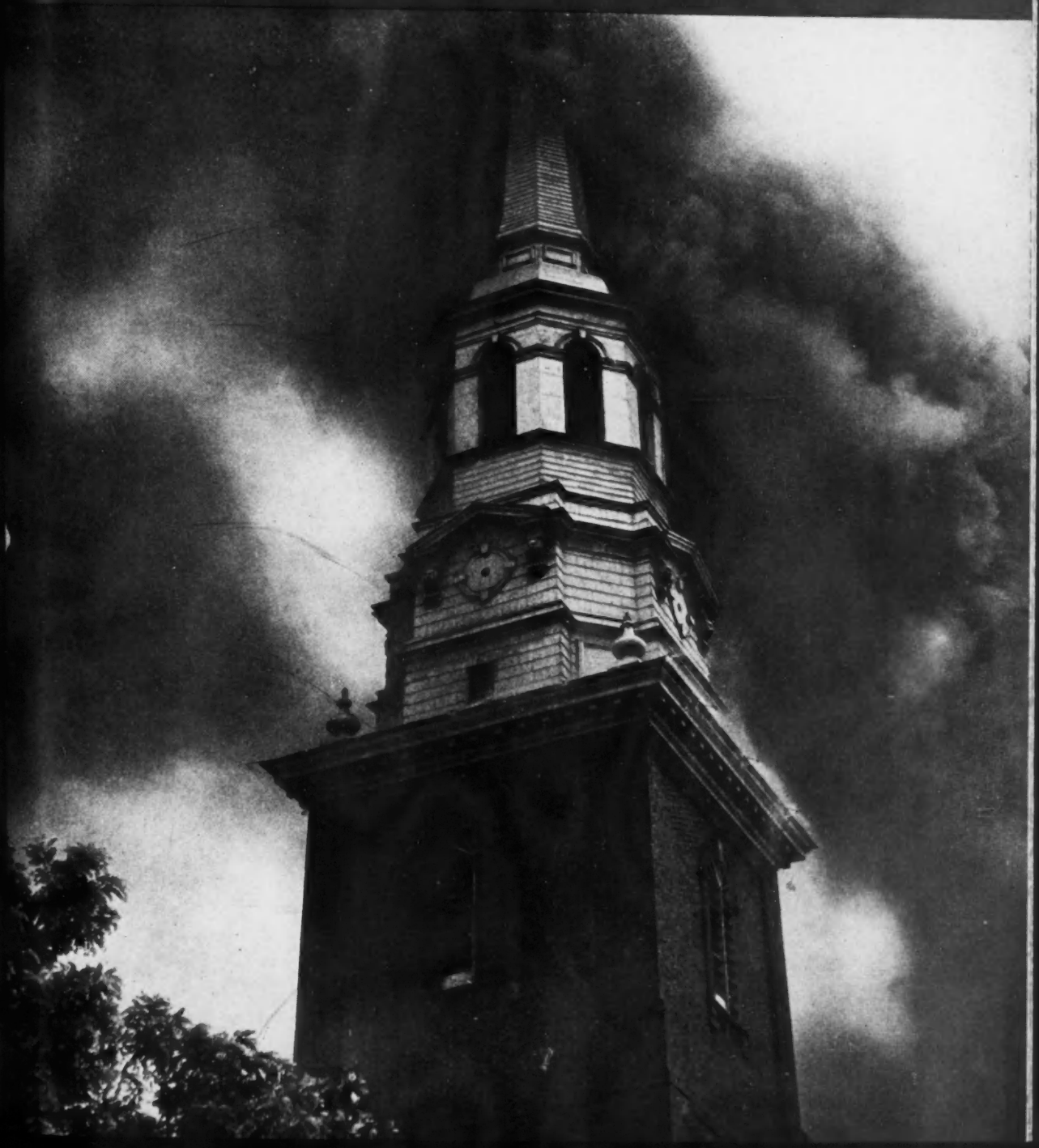
# Volunteer Firemen

OCTOBER 1944

NATIONAL FIRE PROTECTION ASSOCIATION
INTERNATIONAL
60 Batterymarch Street Boston 10, Massachusetts



# When ignorance is blistered!

● It's the ignorant men who make costly mistakes. Trained men don't get hurt by small fires. Trained fire-fighters don't let little blazes grow into big ones.

The way to train workers in fire extinguishing is by demonstrating use of extinguishing equipment. Show how to handle real fires. Show how various types of extinguishers are handled on different kinds of fires.

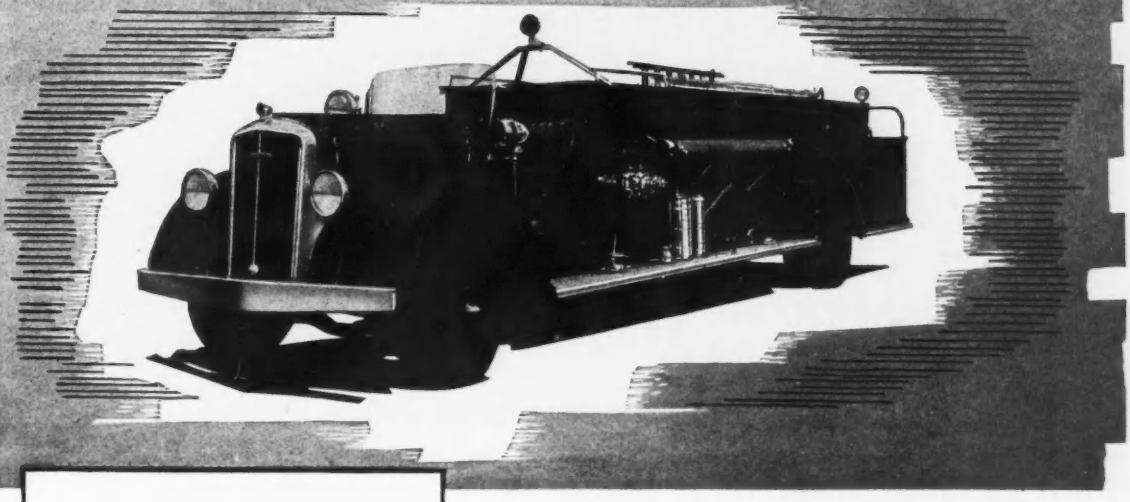
Walter Kidde & Company has prepared a booklet—"How To Teach Fire-Fighting." It tells how to stage a fast-moving, interesting, instructive fire class. Write for your plant's copy.

**Walter Kidde & Company, Inc.**
**140 Cedar Street** **New York 6, N. Y.**

**Kidde** PROTECTS LIVES
HIGH PRESSURE GASES • FIRE PROTECTION

THIS ADVERTISEMENT IS ONE OF A SERIES APPEARING CURRENTLY IN INDUSTRIAL PUBLICATIONS

# FIRE "DEPARTMENT" for Minneapolis



## WARD LAFRANCE

### 1000 G. P. M. QUADRUPLE

**Overall Length:** 35 ft.

**Weight—Empty:** 22,000 lbs.

**Cylinders:** 6

**Wheelbase:** 274 in.

**Horsepower:** 200

**Pump:** 1000 G. P. M.

**Hose Capacity:** 1100 ft. 2½ in.
600 ft. 3½ in.
400 ft. 1½ in.

**Booster Tank:** 100 gals.

Designed by Ward LaFrance Truck Division for the City of Minneapolis, this 1000 G. P. M. "Quad" is a departure from standard models, and is so completely equipped that it is virtually a whole fire department on wheels. Included in its equipment are: 9 ft. enclosed four-fold Browder life net, 6 gas masks, 12 salvage covers, 3 in. and 2½ in. hose compartments on side of truck, gate valves for suction inlets, 2-12 ft. lines of 4½ in. soft suction hose, 8 pike poles, 6 axes, Bresnan collar nozzles, Peerless Hose Clamp, Shepherd hook and battering ram.

Whether your community is large or small, or has unusual operating conditions, it will pay you to investigate the economy and common sense behind Ward LaFrance engineering and manufacturing processes.

**WARD LAFRANCE TRUCK DIVISION**
**GREAT AMERICAN INDUSTRIES, INC., ELMIRA, N. Y.**

**WARD LAFRANCE**

## Knocks Out Large or Small Fires

# FAST— with a Wallop

## Backed by 3-TONS of Cardox $CO_2$

Packing a wallop of 3 tons of zero-cold liquid carbon dioxide, Cardox Fire Trucks provide extinguishing coverage heretofore beyond the scope of any mobile $CO_2$ equipment other than the Cardox Airport Fire Truck.

Ready to roll at the first flash of fire . . . a Cardox Fire Truck goes into action fast . . . knocks out fires quickly. For the first time, it enables a single mobile unit to meet 5 basic requirements.

**1.** IMMEDIATE EXTINGUISHMENT and COOLING . . . Always ready, always under its own pressure, Cardox $CO_2$ is applied in a *mass* discharge . . . hundreds of pounds per minute of it . . . that extinguishes fire and cools out fire zone and combustibles.

**2.** WIDE COVERAGE for INDOOR or OUTDOOR HAZARDS—Enclosed spaces can be *totally flooded* quickly. Momentary *area flooding* backed by 3 tons of Cardox $CO_2$ can be achieved outdoors.

**3.** LARGE CAPACITY—Even relatively large fires are within the scope of Cardox Fire Trucks. Equally important, numerous smaller hazards requiring proportionately smaller extinguishing applications, can be given uninterrupted protection with a single filling of Cardox $CO_2$.

**4.** UNIFORM, ENHANCED EXTINGUISHING PERFORMANCE—Carbon dioxide, one of the fastest of all extinguishing mediums, is given enhanced fire extinguishing performance through Cardox control and engineered application. $CO_2$ released at 0°F. and 300 p.s.i. yields approximately 45% $CO_2$ snow (dry ice at minus 110°F.) —provides more effective projection, and increases cooling effect.

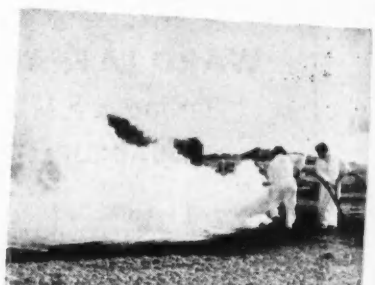
**5.** NON-DAMAGING, NON-CONTAMINATING—Cardox $CO_2$ is clean . . . dry . . . does not contaminate oil or gasoline . . . does not damage class "A" combustibles. It can be applied directly to electrical equipment.

Write on company letterhead for Bulletin 2484.

**CARDOX CORPORATION**
**BELL BUILDING • CHICAGO 1, ILLINOIS**

*District Offices in* New York • Boston • Washington
Detroit • Cleveland • Atlanta • Pittsburgh
San Francisco • Los Angeles • Seattle

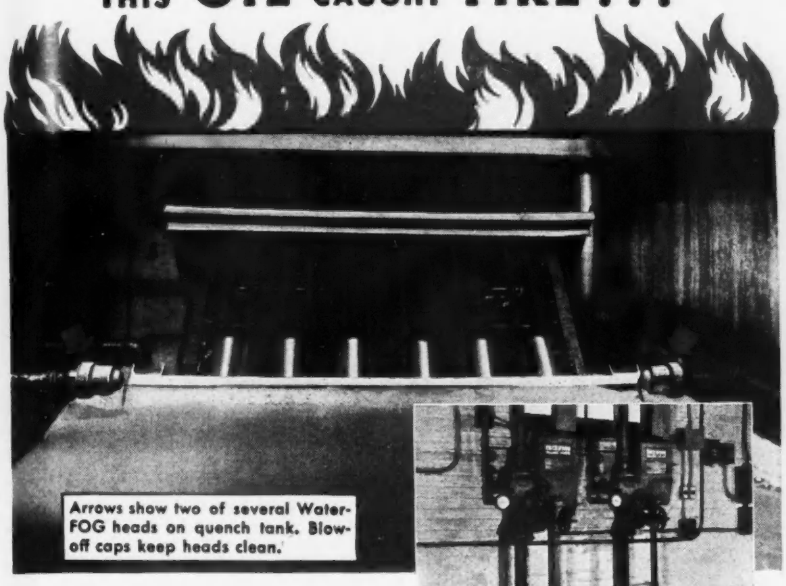
Mass discharge of Cardox $CO_2$ at approximately 700 lbs. per minute from one of Cardox Fire Truck's two hose lines, as operator approaches fire fed by 100 gallons of high test gasoline.



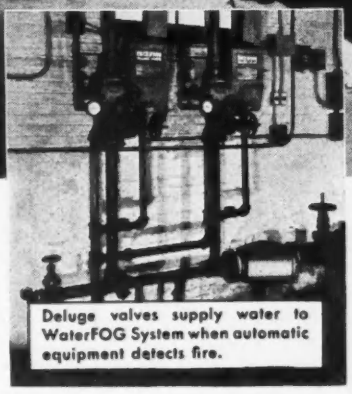
Blanket of cold, inert Cardox $CO_2$ smothers the fire and cools the fire zone.

Note $CO_2$ snow around pool. *Many* fires such as this can be extinguished with a *single filling* of the 3 ton Cardox Fire Truck storage tank.

# THIS OIL CAUGHT FIRE . . .



Arrows show two of several WaterFOG heads on quench tank. Blow-off caps keep heads clean.



Deluge valves supply water to WaterFOG System when automatic equipment detects fire.

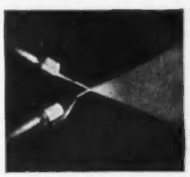
## ROCKWOOD WaterFOG *Put it Out!*

4,000 gallons of oil in a quench tank . . . shell casings passing through, hot from the hardening furnace . . . and a WaterFOG System protecting against fire.

Suddenly a burst of flame . . . the entire surface ablaze! Just as suddenly . . . an all-enveloping cloud of fog . . . snuffing the fire, cooling the liquid. In no time at all, production resumed — no damage, only the merest delay, thanks to WaterFOG.

Such is the experience of a shell plant in Chicago . . . another in South Bend . . . another in Worcester . . . where oil quench tanks are WaterFOG-protected. And other flammable liquid hazards are similarly protected — transformers, paint shops, dryers, oil storage, etc.

WaterFOG, being *water*, is cheap, plentiful. Being *fog*, it is effective on flammable liquid fires where spray and solid stream are unsafe. It works faster, cools a wider area, doesn't splash. Both Underwriters' Laboratories and Associated Factory Mutuals approve Rockwood WaterFOG installations; the Navy, Coast Guard, Maritime Commission and Army, and hundreds of plants use WaterFOG — fixed piping and hose nozzles. Write for Bulletin 123.

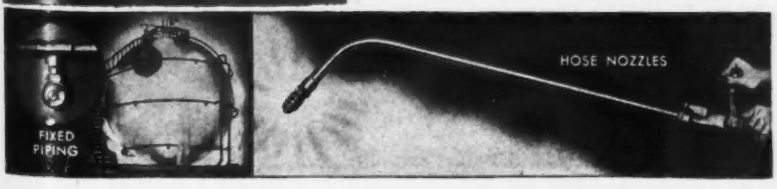


**WaterFOG is—** Water, broken into tiny foglets much finer than spray, by impinging streams from Rockwood nozzles. Floating over the combustion area, they absorb heat faster than spray or solid stream . . . cooling the fire, retarding vaporization . . . and changing into steam, shut off oxygen.

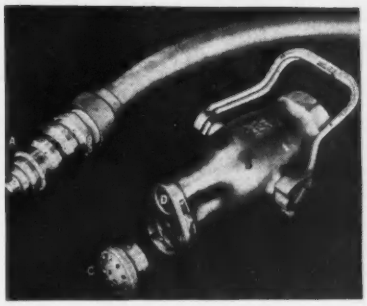
**ROCKWOOD SPRINKLER COMPANY**
88 Harlow St., Worcester 5, Mass.
*Specialists in Fire Protection Engineering, Equipment and Installation since 1907*

**ROCKWOOD WaterFOG**

*Water Engineered by Rockwood Cools, Confines, Smothers Oil Fires*




## FOG for Cooling, Confining, Extinguishing or SOLID STREAM for Deep-Seated Fires



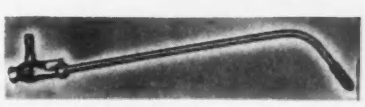
*Rockwood's SG-40 Nozzle Projects Either—by a Quick Movement of the Handle!*

SG-40 Nozzle, and extension applicator for attachment to regular fire hose line. 1″, 1½″ and 2½″ sizes.

Discharging high-velocity WaterFOG with considerable forward projection.

Moving the handle causes a solid stream to be discharged.

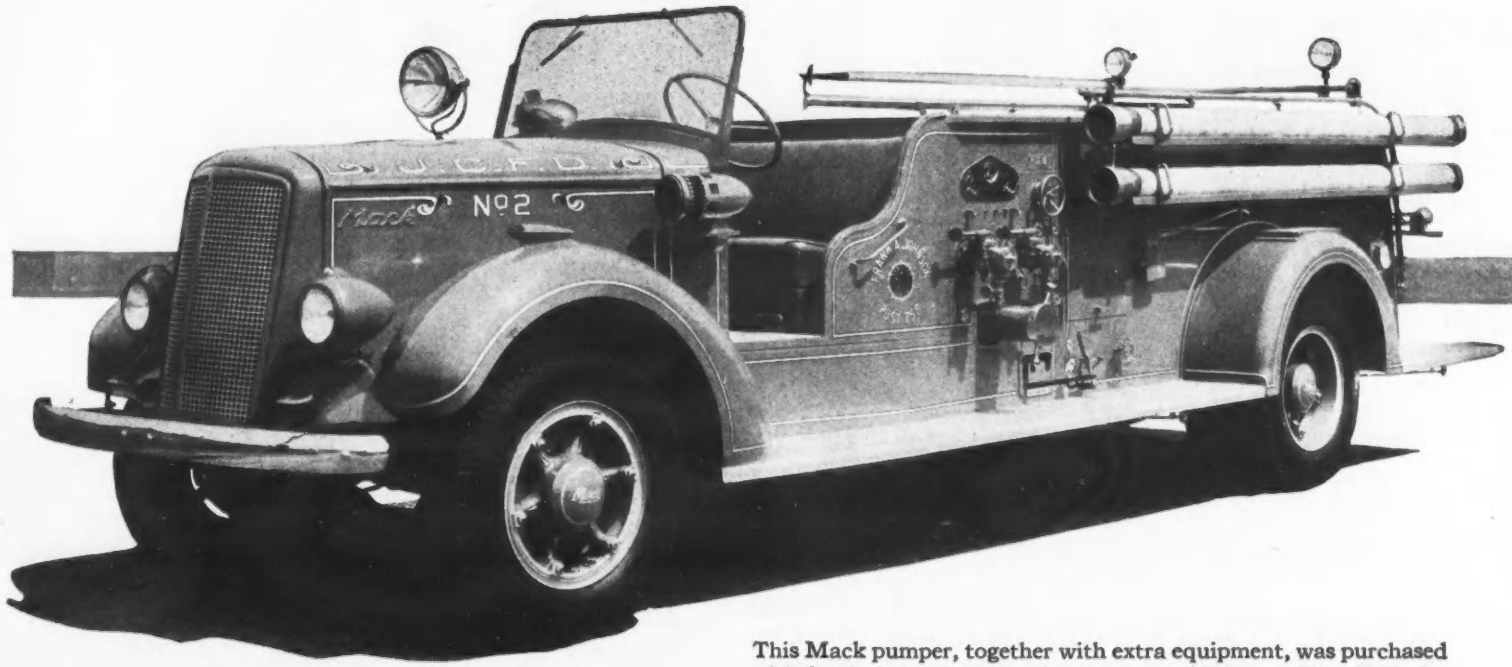
*And for Fighting Fires Close Up—*
FOG Tip being removed . . .
. . . replaced by applicator.



With extension applicator attached, SG-40 projects low-velocity WaterFOG in ball-shaped pattern. 4′ and 10′ applicators fit 1½″ nozzle; 12′ applicator fits 2½″ nozzle.

**Write for Bulletin 123,** giving more complete information on WaterFOG equipment.

**EXECUTIVES!** A colored movie (16 mm.) showing tests of Rockwood WaterFOG, is available.




This Mack pumper, together with extra equipment, was purchased with funds donated to the city treasury of Johnson City, N.Y., by the Frank A. Johnson Post Number 758 American Legion Memorial Corporation, Raymond A. McLaughlin President. George B. Roberts is Executive Secretary of the post and James R. Madden is Commander of the post.

There's no better way of showing your civic pride than by giving your home town adequate protection. That's why members of the Johnson City, N. Y., American Legion Post provided their city with additional Mack Fire Apparatus. They know that fire can be the chief menace to any city, and they know, too, that when you're fighting a fire, you can't beat Mack for fire protection!

**Mack**
**FIRE APPARATUS**

*If your community needs additional fire-fighting equipment or replacements, think of Mack. Remember, Mack Fire Apparatus is backed by the greatest engineering resources in the industry.*

**Mack Manufacturing Corporation, Fire Engine Division**
**Empire State Building, New York 1, N. Y.**

ARMY E NAVY
**BUY WAR BONDS**

*IF YOU'VE GOT A MACK, YOU'RE LUCKY . . . IF YOU PLAN TO GET ONE, YOU'RE WISE!*

IF YOU'VE GOT A MACK, YOU'RE LUCKY . . . IF YOU PLAN TO GET ONE, YOU'RE WISE!
Industry.
FIRE APPARATUS

# Volunteer Firemen

Volume 11 Number 10

Published by the National Fire Protection Association, a voluntary non-profit organization, 60 Batterymarch St., Boston 10, Mass.

PERCY BUGBEE *General Manager*
ROBERT S. MOULTON *Technical Secretary*
HORATIO BOND *Chief Engineer*
WARREN Y. KIMBALL *Editor*
CHARLES S. MORGAN *Advertising Manager*

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THE VOLUNTEER FIREMAN

BECAUSE of time consumed in printing and mailing several weeks will necessarily elapse after this is written before VOLUNTEER FIREMEN reaches its readers. But as we write, the Allied armies are drawn up before the Siegfried Line. We sincerely hope that before you read this a knockout punch will have put the line out of business and have opened the road to Berlin. We mention this because U. S. Government officials have promised a forty per cent cut in war production to permit resumption of civilian production when Germany is licked.

No doubt fire protection equipment for the home front will be among the first essentials when civilian production is resumed. We all know of the need for such equipment as evidenced by greatly increased fire losses during the past year. The fall of Germany will be none too soon for each community to start doing something about obtaining better fire protection.

We are not saying that the war is all over but the shouting. Our members will know the proper time for thanksgiving — which will not be until the Stars and Stripes, and the Union Jack, fly over the Imperial pavilions in Tokio. However, there should be many benefits when the first of our two simultaneous wars has ended with the demise of the Hitler mob. Some of our fire department members will doubtless be among those coming home as the Army begins to demobilize part of its ground forces. Increased gasoline allotments to civilians should permit better attendance at fire schools and other firemen's meetings. We do not begrudge the gasoline used by a B-29, but one run over a target on Kyusho or Honshu obviously uses enough to permit a lot of travelling to the state fire school.

FIRE Prevention Week (October 8–14 this year) is becoming more and more Fire Department Public Relations Week. The fire prevention message is a story that is best told by the members of the fire service in each community. Strange as it seems, the public still has to be told that most fires occur because of carelessness with cigarettes and matches, misuse of electrical facilities, failure to get heating equipment, including chimneys, ready for winter, and other common fire hazards.

The Fire Department can put this message across and at the same time renew its acquaintance with the citizenry it serves. Fire Prevention Week activities benefit both the public and the fire service.

(See "Dramatizing Your Fire Prevention Week Message," page 10.)

FIRE losses in the United States during August were estimated at $30,618,000, according to figures of the National Board of Fire Underwriters. The total fire losses for the 12 months ending August 31, 1944, were $412,290,000, compared with a total of $348,400,000 for the 12 months ending a year earlier. August losses were 18.3% above the losses for August, 1943.

TO the experienced fire fighter the directing of a hose stream is something of an art in which he takes a certain measure of secret pride. Probably that is the reason why many of the old timers in the service just can't keep their hands off the line and even when they wear a white hat they still want to direct each stream with commands of "play it here" or "turn it over there." The blacking out of a raging fire, the obtaining of proper deflection inside a room, or the protecting of exposed windows are all problems of fire stream operation with which the fire fighter has long been familiar. The present widespread use of "fog," "spray" and "high pressure blast" streams is giving hosemen an opportunity to find out what such jets will do under varying conditions. Some departments even use spray nozzles to assist in ventilation by playing them out of a window to draw out the smoke.

Fire officers report that due to the shorter reach of many spray streams as compared with solid streams, there is a tendency for hose crews to endanger themselves by getting too close to certain types of fires involving flammable liquids and materials of an explosive nature. Although very effective on many types of fires, the spray type of stream is not a cure-all and, where "reach" is needed to permit operation at a safer distance, it may be important to select a nozzle that will carry an effective stream farther than is possible with some of the types of spray nozzles as now employed.

On the other hand, some volunteer departments operating in areas without hydrant protection and chiefly dependant on water tank supplies have obtained excellent results on serious rural fires by means of fog nozzles on 1½-inch hose lines to permit cooling down of intense flames so as to control the fire with the comparatively small streams that can be supplied by water tank apparatus.

THE cover picture this month (*Philadelphia Inquirer* photo) shows the spire of historic old Christ Church in that city, protected by open sprinklers as a large fire rages nearby. For a full report see page 16.

# FIRE STATION DESIGN

George Ernest Robinson, Architect

**Mr. George E. Robinson, graduate of Massachusetts Institute of Technology and a Boston architect for more than 30 years, has made fire station design a matter of special study because of his personal affection for many members of the fire service. He has personally designed or served in a consulting capacity, in the erection of fire stations in many parts of the United States. His experience ranges from one-door stations for volunteer companies to large multi-door stations in big cities.**

**The following is based on a talk given by Mr. Robinson before the 1944 N.F.P.A. Volunteer Firemen's Forum in Philadelphia.**

FIRE station design will vary with the type of district to be protected. Stations are required for rural districts, mill and factory areas, large villages and towns, metropolitan districts with both suburban and high value areas. There are some features which all fire stations have or should have in common. All fire stations should be as nearly fire resistive as possible. In the past, numerous fire stations together with their apparatus have been destroyed by fire. In some cases, as at West Concord, Mass., a few years ago a sweeping conflagration resulted when the fire station and apparatus burned. The fire station should be an example of fire resistive construction for the community. This is particularly important where the fire alarm headquarters equipment for the community is housed in the fire station.

In the design of every fire station, the proper area and required depth of the apparatus floor must be considered, as the correct housing of apparatus is of prime importance. In many fire stations there is scarcely room to move about to service apparatus, change hose, or man the appliance quickly in case of an alarm.

Fire stations require adequate doorways. This might seem obvious, but it is a fact frequently overlooked. Some large and modern stations have doorways so narrow that the apparatus may be moved in and out only with great caution. Doors should be of sufficient width and height to permit rapid movement of apparatus, particularly where the station is to house several vehicles; some of which may not be lined up directly behind the door and thus may have to come out at an angle. In many cases a one-door fire station will take care of whatever apparatus is needed and in residential areas the station can be made to resemble a private dwelling with garage.

Fire stations are customarily designed to blend with the architecture of the particular section and community. In one Cape Cod fire district a brick fire station was cased in a frame exterior to resemble the prevailing type of building.. In the South and West the Spanish type of exterior treatment is indicated. Others would require modernistic or utilitarian design.

There are certain basic necessities that are required for every fire station. Perhaps first should be mentioned a proper location. There must be a good get-away for the apparatus. Fire stations should, as far as practicable, have access to highways leading to all parts of the district so that the apparatus can enter the traffic arteries safely. It is usual to have the apparatus floor grade about three feet above street level where there is a driveway apron. It is important that the driveway or apron be paved with a surface that will not promote skidding when the apparatus turns into the street on a slippery night. Suitable warning lights and sirens may also be employed in connection with the get-away into traffic.

Every station, whether for use by volunteer or full-time men, should have adequate toilet and washroom facilities. Many of the older stations are inadequately equipped to permit men to clean themselves or the apparatus after a fire, or to permit bunkmen to wash and shave with reasonable comfort in the morning.

Buildings should contain adequate heat to protect the equipment against cold and damp weather, and to make the social rooms and crew's quarters livable. Adequate ventilation and good lighting also must be provided. Good lighting will prevent accident and errors when responding to alarms and will help make the station clean, attractive, and livable at other times. Many fire stations have a master switch that may be used to throw on lights in all parts of the structure when an alarm is received. Signal bells for alerting the crews or giving special signals would also be provided.

In all stations housing engine or hose companies, hose drying facilities must be provided. In many instances, racks along the walls or in the basement have replaced the old hose and bell tower for hose drying purposes. Hose drying cabinets are used successfully in many departments to conserve space and speed the drying time. It is customary for the architect to provide for the type of hose drying facility wanted by the fire department.

Provision must be made in every station for a patrol desk or point where alarms can be received, directories of addresses and locations kept for ready reference, fire alarm receiving instruments and telephone service provided, and where the company journal is maintained. Such a control point or "patrol room" should be located where the operator on duty can survey the apparatus floor to assist in dispatching of apparatus, and yet be out of the line of traffic. In many instances, a glassed-in enclosure is used to reduce the noises attendant with the response of fire apparatus. The patrol room should also be in close proximity with the door the public will use in making inquiries at the station. The man on patrol is generally responsible for knowing when persons enter or leave the station.

Consideration must be given to the possible need for housing auxiliary equipment

**This two-door fire station houses a volunteer fire department. The hall is rented out to raise money. The station, built before the war, cost $20,000.**

in addition to the regular pumper and ladder equipment operated by the companies assigned to the station. There may be small pumps or civilian defense type auxiliary pumps and trailers, special ladder equipment, reserve hose units, portable boat rigs for use in rescue operations, fire alarm and departmental service vehicles, brush fire rigs, and ambulances, to name only a few. In some cases where terrain permits, a garage is provided in a portion of the basement for such auxiliary units, in other stations a rear or side approach with an apparatus door permits the removal of such units without moving the major apparatus. As usual, site possibilities and the special units to be housed will govern the exact arrangement.

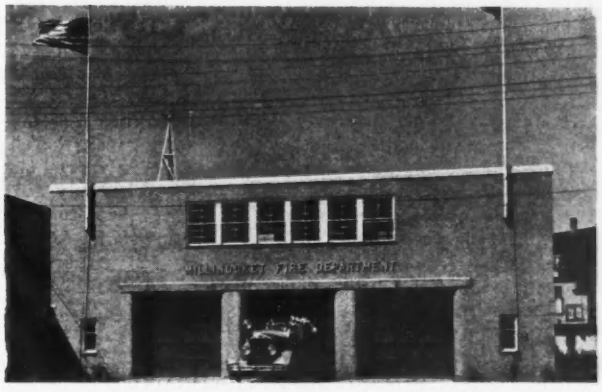
Every fire station, paid or volunteer, requires social rooms where men may smoke and relax, or hold meetings. Comfortable quarters with recreational facilities encourage the volunteers to be on hand in their spare time and thus provide quicker response with better manned apparatus. With a bungalow-type station, the social rooms at the rear may be subject to exhaust fumes from the motors. This may be overcome by raising the social rooms a few steps above the level of the apparatus floor.

Paid men spending long hours in the fire stations also deserve proper recreational facilities. The better stations provide, in addition to the usual smoking room or "common room," a radio room for those who desire to listen to some favorite program, a library or study room for those interested in converting their time into knowledge or wanting to brush up on anticipated examination questions. It must be admitted that it is not easy for men to study to the tune of clicking billiard balls, Modern fire fighting requires knowledge of a vast variety of problems, because fire fighters are concerned with almost every phase of community life and industry.

Every fire station needs kitchen and eating facilities. What would the life of the volunteer fire department be without its supper, banquet, or collation. Full-time men must also eat proper meals during regular working shifts in addition to the midnight snack that follows the return from a fire call.

Of no less importance is the need for dormitory facilities. This should be obvious for paid fire departments, and yet we find many fire stations woefully inadequate in this respect. Perhaps they were built for a small unit, such as a former chemical company or a partly call or volunteer force, and may now house two or three companies. In volunteer departments there has been a marked increase in the use of bunkmen who take turns sleeping in the station to serve as apparatus drivers. This is particularly true where the department operates the local ambulances or rescue squad service. Also, in bad winter weather it is common for many volunteer departments to maintain a working crew in the station at night. Thus a moderately sized but properly ventilated dormitory should be considered. In full-time fire companies, officers' rooms and offices are required. Additional facilities of this nature are needed where chief officers are to be quartered in the building in addition to company commanders. These officers' quarters should have sufficient privacy so that conferences and disciplinary action can be conducted properly. It is also usual to provide additional toilet facilities near the dormitories and officers' quarters.

**This little bungalow fire station didn't cost much money. It was placed to protect an isolated residential district of a city. There are bedroom facilities, smoking room, kitchen, fire alarm watch room, and in the basement is an attractive community hall with fireplace. The station houses a 750 gallon pumper.**



**Here is a utilitarian fire station in a northern paper manufacturing town. The building also houses the fire alarm and ten police cells.**

Another important matter, all too often overlooked, is the need for adequate locker facilities. Particularly in paid departments, each man requires an adequate locker where he can keep his street uniform when on duty in the station, and his working clothes when out of the station, in addition to personal items such as books and magazines that might stray if left out in the common room when off duty. Some stations have separate bunk rooms for the men, frequently shared by men working on opposite shifts and containing lockers and perhaps a chair for reading or desk for study purposes.

Locker and storage rooms are also required for the many supplies that are needed in a fire station. It would be very careless and wasteful to leave the numerous supplies out in the open but where they are placed in locker rooms they may be kept under proper inventory control. It is customary to have an upstairs supply room to house linens and stationery and other such house items, whereas supplies required for servicing apparatus or equipment would be in a downstairs or shop section. It is of particular importance to give consideration to the need for shop facilities where minor repairs and adjustments can be made without taking the apparatus out of service.

Strange as it may seem to the uninitiated, a fire station is extremely intricate in plan. Each station presents new and interesting problems. Fire stations in themselves may not put out fires but they must be carefully designed to house personnel and equipment for the most efficient service to the community.

# Dramatizing Your Fire Prevention Week Message

By CAPTAIN EDWARD F. CURREN

THE fireman who is prepared to illustrate his Fire Prevention Week message with demonstrations will leave the greatest impression on his audience. Lecture hall experiments with such familiar materials as matches, crepe paper, a lump of sugar, and some cigarette ashes will entertain the audience, but what is more to the point, the audience will remember what was said.

The Underwriters Rating Board has prepared a talk and demonstration for fire chiefs to use at some public gathering during Fire Prevention Week. At the end of the message three demonstrations are introduced to dramatize for the audience safe and unsafe fire conditions.

The talk is as follows:

"This is Fire Prevention Week. Fire Prevention Week annually occurs in October and corresponds as closely as possible to the date of the notoriously disastrous Chicago fire. The fact that a member of the Fire Department visits you during this week to impress on your mind the need for Fire Prevention does not imply that Fire Prevention should be practised only during this week. We fail entirely in the purpose of preventing fires if we are not constantly, every day, every minute, on guard against anything which might cause a fire, or aid in the spread of a fire.

"Fire Prevention is everyone's business. It is your business. What is done by your neighbor will very likely affect the safety of yourself and your family.

"Let us consider what our action would be if our next-door neighbor had a vicious dog. Such a dog would immediately become a concern of his neighbors, because the law states that you cannot unduly annoy your neighbor; if you have a vicious dog, he must be confined to your property or else he must wear a muzzle.

"So, too, a neighbor who does not care for his property to the extent that he will keep it reasonably free from accumulation of rubbish or any burnable material, is a potential source of danger to the entire neighborhood. It is just as reasonable for a person to be concerned with the condition of housekeeping in his immediate neighborhood as it is to be concerned with the condition of his own property. Such common causes of fire as faulty heating systems and chimneys, careless use of smoking materials, amateur electrical installations and the failure to rid the premises of combustible materials, are still the principal causes of home fires.

"Fire at any time results in a loss to the property owner regardless of the amount of insurance carried. Replacement of partly burned property in normal peace times is difficult. Because of the war situation, replacement of property involved by fire is today almost impossible. So, this year more than in any previous year, you and every other person in the entire community should be ever watchful for the fire safety of your home and your neighbor's home.

"The slogan of Fire Prevention Week authorities that 'a clean house seldom burns' is an actual truth. So, if we will all do our very best, beginning with this Fire Prevention Week and continuing throughout the year, we shall do a service not only for ourselves and our family, but also for our community and our nation. Let us adopt the slogan, 'Do your part and fires won't start.'

"I am going to show you a few simple demonstrations which I hope will succeed in making you more conscious of the elements of fire than you have ever been before. We are accustomed to talking about 'normal conditions,' but you must remember that whenever we have a fire present, we no longer have 'normal conditions.' Today you may pass along the street and look at any structure in the town and what you see will probably be brick, wood, paper and other combinations of material which represent a building. When this building is burned you no longer have brick, wood, and paper. The only things remaining after a fire will be ash, gas, and smoke. Of course, ash, gas, and smoke cannot provide living quarters for any family. Furthermore, the individual, the community, and the nation have suffered a loss which is never fully restored. One thing that I would like to stress here is that it is the duty of every person in the community to know how to send an alarm of fire, and to send it promptly. (Here the Fire Chief should outline briefly his alarm system and how it may be used by any resident.)

"Now let us see what happens when a fire takes place.

"Here we have a folder of matches. There is nothing strange about these. We use them in our everyday life.

"Please remember this statement: You cannot have a fire unless three things are present: Fuel, Air, and Heat.

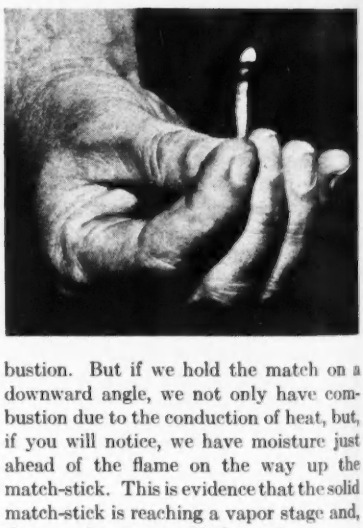
"Now, your fuel, whether solid or liquid, must be in a vapor state before it burns. So let us light the match. The head of the match is made of material which has a very low ignition point.

"To reach the degree of temperature necessary for it to reach the flame stage, we draw the head of the match across the striker.

(Ignites match by drawing it across striker.)

"We have now generated enough heat to fire the match.

"Now, holding the match in an upright position we do not have really good combustion. But if we hold the match on a downward angle, we not only have combustion due to the conduction of heat, but, if you will notice, we have moisture just ahead of the flame on the way up the match-stick. This is evidence that the solid match-stick is reaching a vapor stage and, thus, can be more readily burned.



"If we blow on the match as it burns, (blow on the flame) we are blowing the heat away from the stick and thus reducing the temperature of the stick below the burning point.

"If we should push the match into a very small space (place match in the

---

**Captain Curren is the Executive Manager of the Underwriters Rating Board, 1 Columbia Place, Albany 7, N. Y. He is the former Chief State Fire Instructor under the Office of War Training of the New York State War Council.** **(See VOLUNTEER FIREMEN, July, 1944, p. 12.)**

folded-over top of the match pad), we would not have sufficient oxygen to permit it to burn and the match would go out.

"What I have just shown you, in very simple form, illustrates the entire theory of fire.

"The next thing that I would like to show you is a little demonstration concerning 'Fire Safety.'

"Whenever a group of youngsters or adults gathers in a place of public assembly, some person usually makes the suggestion, 'We should decorate the place.' Now, here is the cheapest and simplest form of decorative material, usually obtainable in any community regardless of its size — ordinary crepe paper. When this is fastened to the ceilings and side walls of the room, the possibility of a 'flash fire' is very much increased. You remember that the cause of Boston's Cocoanut Grove Fire was given as the use of flammable hangings.

"Now, here are two similar pieces of crepe paper. One of these is ordinary

flammable crepe paper, and the other is what is known as flame-proof paper. I will light the ordinary paper and you will notice the speed at which it will burn. (Light the flammable crepe paper.)

"Now we will attempt to light the flame-proof and you will notice that when I release the match there is no longer any flame. (Attempt to light flame-proof paper.) This is the safe type of decorative paper to use in any hall or public assembly. All you have to do to provide this kind of safety to the people gathered in any place of public assembly is to ask your dealer for *flame-proof paper. Never accept* any other kind. If we do this *always* it may result in saving your life and many other lives in our community.

"Now I would like to show you one more demonstration.

"Today with the great number of chemical materials which are in use in every home, the fire departments are confronted with a great many new types of fire hazards. Chemical compounds run into a staggering total — up in the millions! However, I would like to show you this simple demonstration which will indicate to you that a slight chemical change would alter the burning properties of very common materials.

"I have here a lump of sugar. (Hold up lump of sugar.) Now, if I light a match

and apply it to the corner of the lump of sugar I succeed in doing two things. I carbonize the sugar and I obtain an accumulation of syrup at the point where the heat was applied. That is the normal action of sugar in the presence of flame.

"Now I have here a little cigarette or cigar ash. I am going to rub the corner of this other lump of sugar in the ash and then apply a match to that corner. You will note that sugar now burns with a flame. This is just a very slight indication that

chemical changes do occur whenever materials are in combination or mixture.

"The Fire Department of your town has been a constant safety factor in the community for many years.

"The Fire Department is primarily interested in preventing and extinguishing fire. I cannot recommend too strongly that any resident of our town who has a fire problem should bring it to the qualified agency in his town for solution — your own Fire Department! Thank you."

# Handymen of London

FIREMEN have always been known for their capacity to handle all sorts of jobs in addition to their duties as fire fighters. The men of the National Fire Service in the London district are rapidly achieving a reputation for their capacity and willingness to help in any emergency.

Apart from being quickly on the spot after a bomb incident with equipment often vital in saving lives — such as oxygen apparatus, ladders to reach persons trapped on upper floors of buildings, and other equipment — they are ready to do anything from the removal of furniture to transporting evacuèes from their homes to railway stations. They do many odd jobs. For example, they are now helping to repair houses damaged by flying bombs. Many of them are quite capable in this direction, for they have had experience not only in building fire stations but in putting together the static water dams which have so often proved their usefulness when fires have been caused by enemy action.

The men are grouped according to their own trades. They are available on request by local authorities to relieve local labor shortages or to effect first aid repairs to damaged houses or other buildings.

In a recent case National Fire Service men were repairing houses within about an hour of the damage. They are giving good service in the preparation of buildings for the work of the more highly skilled men. They use their lorries to remove furniture salvaged from damaged houses, either to warehouses for storage or to other houses, again at the request of local authorities, and have more than once been complimented on their care in handling household goods. Other jobs they have done lately include helping to handle luggage at railway stations, transferring milk churns from platforms to trains, and marshalling the crowds of people being officially evacuated from the London area.

National Fire Service women are doing their share to help in the existing emergency. They have augmented the staffs at civil defence control posts, and in some cases girls have sacrificed their leave to help in sorting mails for the Merchant Navy, thus avoiding delays which cause so much disappointment. Cooks attached to the fire service are serving groups who have come to London to take part in repairing damaged houses.

A list of the odd jobs being done by men and women of the National Fire Service would make a substantial document, but not the least of the services which they will soon be giving is that of using their lorries for the transportation of Post Office parcels and letters. And one of the ways in which they have proved their worth has been by supplying fresh drinking water from their equipment to people deprived of normal supplies.

# GASOLINE TRUCK FIRE AT WAYNESBURG, PA.


## by Chief F. L. Hoover

### Waynesburg Volunteer Fire Company (Member N. F. P. A.)


WAYNESBURG, PENNSYLVANIA, has a tradition, broken only three times in sixty-eight years, which says it always rains on the twenty-ninth day of July. When a huge, black cloud rolled up the afternoon of the twenty-ninth this year, many residents looked up and said, "Uh-oh. Here it comes." Almost with their words came streaks of vivid flame, but instead of the rumble of thunder there was the fire siren's wail, followed soon by the lesser screams of the Waynesburg Volunteer Fire Company's trucks. This first alarm was clocked at 2:25 P.M.; by 3 P.M. four other volunteer companies from nearby towns were on the job and all business houses had closed their doors. All up and down High Street tense groups were gathered, fearful that the fire might spread through the entire business district.

A tank truck, loaded with approximately 3,000 gallons of casing head gasoline, was traveling east on High Street. As it approached the first traffic signal and stopped for a red light, an overflow from the tank ignited from some undetermined cause. At once clouds of black smoke rolled up from the truck, followed by flames described as being at least 150 feet high. The driver set his brakes and ran for help.

Fire Chief F. L. Hoover lived about a half block from the scene and was at the fire in less than a minute after the truck was ignited. At that time the two dwellings near the truck on the south side of the street were ablaze from the flaming gas sprayed from the top of the tank. Flames were also licking at the weather boarding of another home on the north side of the street. Four automobiles parked on the south side and one on the north side of the street were likewise burning, having been sprayed by gasoline, and exploding tires on these cars could be heard for many blocks. An unusually brisk wind helped to drive the flames onward.

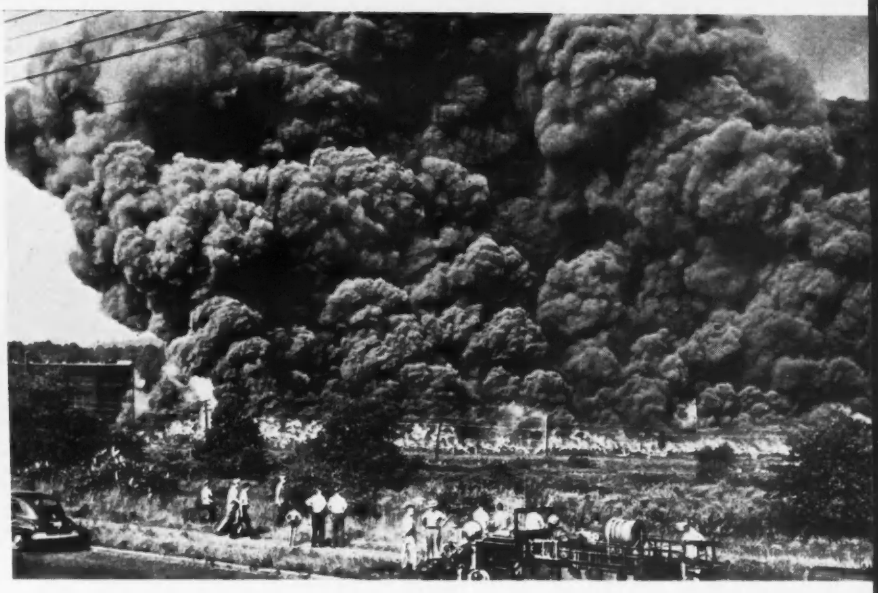
Chief Hoover immediately called for help. The first pumper in the local company to respond was in charge of Captain Wright. He hooked up at the corner of Morris and High Streets where he strung one line of 2½-inch hose to the fire, the plug on the corner of Richhill Street being too hot to use at this time. Assistant Chief Zahniser, from his 750-gallon pumper at the corner of High and West Streets, strung two 2½-inch lines.

Due to the working of the relief valves the tank did not explode, although the front compartment bulged badly. It was possible to extinguish the fire around the base of the truck in short order and then it was left to burn from the top. All possible effort then was spent to save the homes and prevent further spread of the conflagration. When trucks from the Cumberland and

(*Continued on page 29*)

# RUBBER FIRES

*Below* — Six hundred used tires were destroyed in this fire at Portland, Maine, on July 26th. Such a loss is more important measured in pounds of rubber than in Pounds Sterling.



*Right* — The entire Akron Fire Department assisted by companies from neighboring communities was unable to prevent the destruction of the A. Schulman, Inc., scrap rubber salvaging plant on August 3rd. A small fire starting in the congested scrap storage yard gained headway as employees made ineffective use of standpipe hose equipment and chemicals before sounding an alarm. Loss: $338,000.

# CONFLAGRATION
## DURHAM, NORTH CAROLINA

An entire business block in Durham, N. C., was destroyed by fire the night of July 8th. The fire originated in the basement of a furniture storage building, it is believed, and spread to the tobacco warehouses that made up the rest of the block. This fire which involved every building in the block within thirty minutes after the fire department arrived, caused a loss of $279,905.

# Grain Elevator Fires

# Subject to Rekindling

**Two interesting fires from OUR PAPER, published by the Grain Dealers National Mutual Fire Insurance Company, June 1944, show the importance of guarding against rekindlings when fires have presumably been extinguished. Mr. R. D. MacDaniel, editor of OUR PAPER, kindly gave VOLUNTEER FIREMEN permission to reprint the story.**

Fortville Elevator

## Fortville, Indiana Fire

THE boys at the Fortville Grain Company elevator at Fortville, Indiana, treated themselves to an interesting afternoon on May 16th, when they permitted the cob to become too full before lighting the cobs.

An exceedingly hot fire was in progress when the last corn was shelled at three o'clock. The cob spout is vented at the burner, which is located on the leeward side of the elevator, but nevertheless the houseman had noticed considerable heat coming up the spout into the cupola. Although he elected to "watch things" rather than take the precaution of plugging the upper end of the spout when the shelling was finished, it was an outsider who first noticed smoke pouring from the open cupola windows.

Clyde Keyes, part owner of the plant, and the houseman attempted to get into the cupola via the stairs — the manlift appeared too risky — but there was too much smoke on the bin floor. They could see that the fire was concentrated at the throat of the corn spout, where there was (or had been) a considerable quantity of shucks tailed from the cleaner. By the time they reached the ground, the volunteer firemen had arrived with one pumper.

Keyes and the houseman, Slim Schinlaub, returned to the bin floor with a booster line. Upon arrival of the second pumper a 1½-inch line was brought up by Chief Lem Hardin and some more of the boys. Although a third line was laid, the fire, which involved the complete interior of the upper cupola as well as part of the bin floor, was eventually extinguished with the two small streams. Damage to building and equipment will run about $2,000. Water damage to grain will be moderate, partly because of the use of small hose streams and partly because the bins immediately below the fire were empty.

But owner Keyes and his partner, Fred Wright, weren't content to let well enough alone — that night they posted watchmen, and at two o'clock these watchmen extinguished a lively little blaze in a screenings bin.

Next morning they decided to open all possible concealed spaces — just to make sure there weren't any more delayed action fires about the place. And, sure enough, when one of the elevator heads was opened up, there was a nice, little incipient fire quietly smouldering in the space under the head pulley. So, even after this very careful overhaul, they posted watchmen again the following night.

That's what we call an intelligent and thorough job — the kind of job that should be done after every fire, no matter how small.

## Blakeley Oregon Explosion

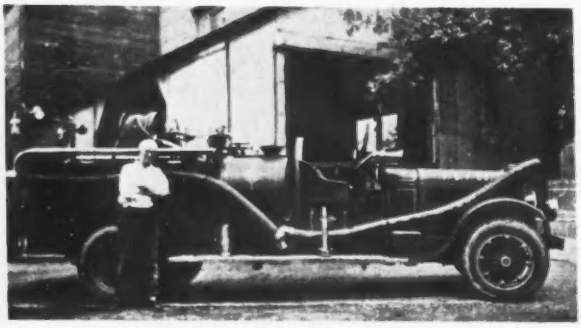
THIS was a 150,000-bushel wheat elevator on the ranch of S. R. Thompson. On the morning of January 14th the elevator operator, B. G. Haynes, hung an extension lamp (approved type) above the boot, started the high-speed cup belt and proceeded to clean up the accumulated dust and wheat spillage in the pit by shoveling it into the boot. Naturally, a cloud of dust was produced. While this was going on, the lamp dropped into the boot, where it and about four feet of cord were chewed up. Immediately there was an explosion.

Section men working nearby were attracted by the noise. Mr. Haynes, by the time of the arrival, had reached the work floor, shut off the motor, and was phoning for the district fire truck at Pendleton, about ten miles away. That at Mission, a like distance, was also notified, but its arrival was somewhat delayed because the local Indians had drained the anti-freeze from the radiator. The section men immediately went to work on the smouldering dust in the pit with the pump tanks with which the elevator was well equipped. No wood had ignited there or elsewhere about the work floor or driveway, which area gave most evidence of the explosion.

*TWO or three hours later somebody thought to investigate the possibility that there might be fire in the upper part of the house* — and, sure enough, he found a small area of the under side of the cupola roof, just above the elevator head, to be on fire. The cupola pump tank quickly attended to that. Apparently the remains of the lamp had been carried up the leg and tossed out, lodging on some surface near the roof.

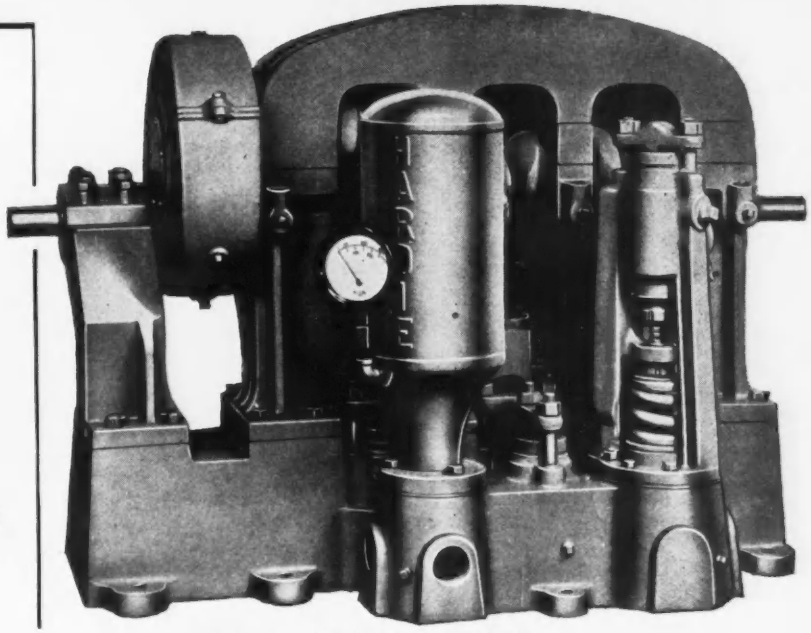
That occurrence gave Mr. Thompson the idea that *there might be other smouldering fires* that hadn't been found, so he hired two of the men to watch during the night. Fortunate indeed that he did so, for at three o'clock the next morning they discovered a fire in progress about two-thirds the way down an empty bin, where an ember evidently had landed on a corner brace. This, too, was promptly disposed of.

The entire damage to the elevator at Blakely ran only about $500 — a rather inconsequential amount — but the details which are typical of such occurrences seemed worth reciting. It is apparent that the principal hazard of a dust explosion in a frame country elevator — whether it is a true explosion or simply rapid combustion — lies in the probability of ensuing fire, both immediately and for a matter of many hours following.

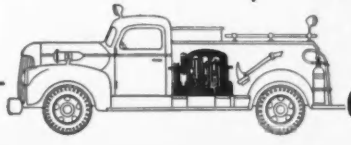


Chief Lem Hardin and one of the pumpers of the Fortville Community Fire Company

# 600 800 P.S.I.



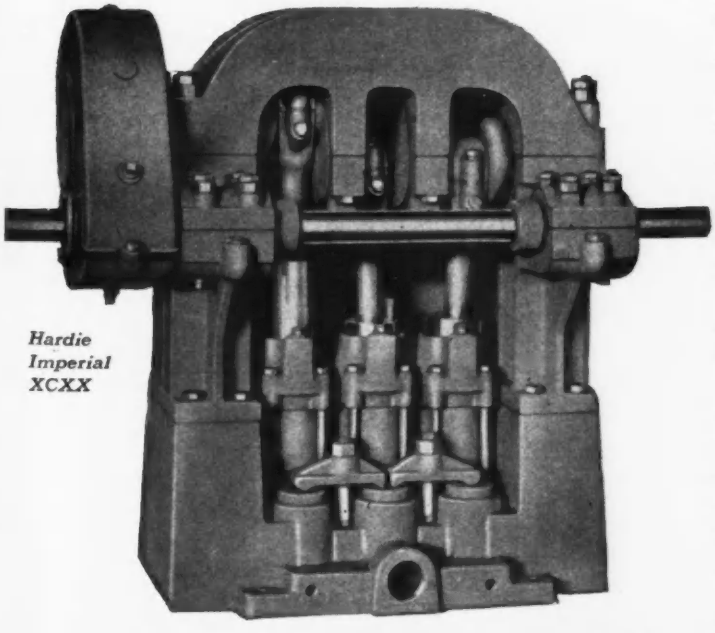
*Hardie Imperial LCXA*



## Specify a

Hardie High Pressure Pump to get the high nozzle pressure you must have in the Fog Fire Fighter you buy. The big, strong vertical crankshaft-driven Hardie gives unfailing pressure and volume under all conditions of use because it carries the pressure load easily, at *slow operating speed.*

The Hardie Imperial Model LCXA Pump delivers 60 gallons per minute at 800 P. S. I. nozzle pressure when operating at 130 R. P. M. The Hardie Imperial Model XCXX Pump delivers 35 gallons per minute at 800 P. S. I. operating at 118 R. P. M. No need to "speed up" the Hardie to get the volume and pressure you want.



*Hardie Imperial XCXX*

The complete lubrication of the Hardie Pump saves power and wear. Hardie alone provides an oiling system by which even plungers and plunger cups run in a bath of oil. These are reasons why leading manufacturers of Fog Fire Fighting Equipment such as U. S. Army Engineers, The Mack Mfg. Company of Long Island City, N. Y., General Fire Truck Corporation of Detroit, Mich., Edgar Road Tank Works of Linden, N. J., and others employ Hardie pumps in Fog Fire Fighters they build. Specify the Fog Fire Fighter with a Hardie Pump.

**THE HARDIE MFG. COMPANY**

**Hudson, Mich. Los Angeles, Calif. Portland, Ore.**

# ★ H ★ A ★ R ★ D ★ I ★ E

*High Pressure* **PUMPS AND FOG GUNS**

**for Fog Fire Fighters**

Photo by *Philadelphia Inquirer*

# OUTSIDE OPEN SPRINKLERS

**Fire departments should know the locations of valves controlling outside open sprinklers which may be used in protecting important buildings against exposure fires.**

HISTORIC Old Christ Church in Philadelphia was saved from ruin in a nearby fire on July 26, 1944, by a manually operated outside open sprinkler system. During a six-alarm fire that swept nearby buildings in the business district, sheets of water under 100 pounds pressure blanketed the church. The water came from forty open nozzles located at four levels on the steeple The system comprises a series of spray heads spaced at intervals; on top of the steeple, in the cornice of the cupola, at figurehead level, and beneath the substructure. In addition to openings on the steeple, others are located above each window and door on the first and second floor elevations of the church.

Outside open sprinklers are a recognized form of protection against exposure fires. They are commonly used in conjunction with other forms of exposure protection such as automatic rolling shutters, swinging shutters, wired glass windows or glass block panels. Detailed requirements for outside open sprinklers are included in the N.F.P.A. Standards for the Installation of Sprinkler Equipments. Most of the manufacturers of automatic sprinklers also make heads for use on outside water curtains. Detailed suggestions for the use of outside open sprinklers in conjunction with other forms of exposure protection are included in suggested standards prepared by the N.F.P.A. Committee on the Protection of Openings in Walls and Partitions.

Because of the large volume of water required to supply an open sprinkler system, this form of protection is ordinarily recommended only when sufficient water is available to supply both open and automatic sprinklers and any other needs for which there may be a demand at the same time. Where water supplies are limited, other methods of protection are preferable.

The use of a water curtain on the outside wall of a building probably antedates automatic sprinklers. In the early years of automatic protection, the ordinary sprinkler head with the strut removed, or a similar device, was used at the peak of combustible roofs and at the eaves of buildings, especially wooden buildings.

Now, special types of open sprinklers have been designed to protect window openings in brick walls. Others have been designed to protect combustible cornices. These sprinklers are placed near the top of the window or under the cornice, and the water discharged against the glass and frame or cornice, as the case may be, thus providing the desired protection.

Open sprinklers to be effective must wet the entire surface being protected. A water curtain not in contact with the window, the wall or cornice is of little value, as the water is broken up into drops through which the heat rays can pass.

THERE are two common window and cornice types of open sprinklers known as the small orifice type and the large orifice type. In either case larger openings are used in the upper stories.

Small orifice sprinklers are commonly used where windows are small or recessed into the wall, especially when the water supply or the exposure is limited.

Large orifice sprinklers have deflectors designed to give a wide angle of distribution. The chief advantages of this type are: (1) the discharge of a large amount of water at low velocities with less waste by the splashing of water away from the building; (2) the comparative freedom from clogging; and (3) the possibility of protecting windows of two or more stories with one line of sprinklers.

A large volume of water is necessary for either the small or large orifice sprinklers. Where water supplies feed other protective appliances, such as automatic sprinklers or hydrants, the system should be so arranged that there is no danger of impairing the efficiency of such other devices. The supply should be able to feed all sprinklers operated at one time at a minimum of 10 pounds pressure at the top of the riser for at least 60 minutes. Where fire department connections are used, they should be located so as to be safe from the exposing fire. Where other water supplies are used and it is desirable or necessary to conserve such supplies for other service, it is good practice to locate a controlling valve or valves for the open sprinklers outside the building itself and accessible as regards the exposure fire.

*Acme*

For good distribution the small orifice heads require at least 8 to 12 gallons per minute per head. The large orifice sprinklers require 13 to 30 gallons per minute per head. The pressure should be not less than 5 pounds at any head while water is running.

Open sprinklers are operated manually. Valves often are located in the basement or first floor of the protected building. Fire department connections are often used in conjunction with the supply from public mains. Pumps are used where they can provide an ample water supply.

Automatically controlled outside sprinkler systems are sometimes used, but because of the heavy demands made upon the water supplies, and the fact that there is usually an appreciable time interval before the discovery of the exposure fire and the time when outside sprinklers will be needed, the use of automatically controlled systems is not common.

Where open sprinkler protection is desired on more than one side of a building, or where there are a large number of heads on one system, the system may be divided with separate control valves for each section.

**Window Sprinkler**

**Cornice Sprinkler**

# GAMEWELL FIRE ALARM SYSTEMS

## *Eliminate Delay - - - Reduce Fire Losses*

THE CONTROL UNIT VITAGUARD TYPE

**This Unit contains all battery, operating, recording and testing equipment necessary for the operation of a system ranging from One to Forty alarm boxes. We supply complete directions for installing.**

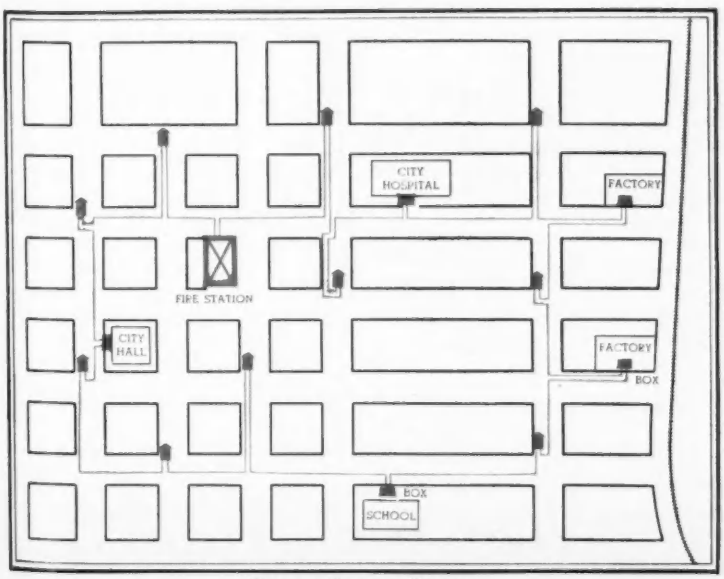
THE GAMEWELL SYSTEM for Volunteer Fire Departments provides the essential elements of accessibility, dependability and speed in giving alarms.

Public fire alarm boxes, quickly accessible, coupled with automatically responsive and coded public alarm equipment *eliminates delay by directing firemen to the scene of fire.*

*WE INVITE YOUR INQUIRY.*

GAMEWELL FIRE ALARM BOX VITAGUARD TYPE

**With guard panel pulled forward exposing operating lever.**




TYPICAL PLAN OF SYSTEM

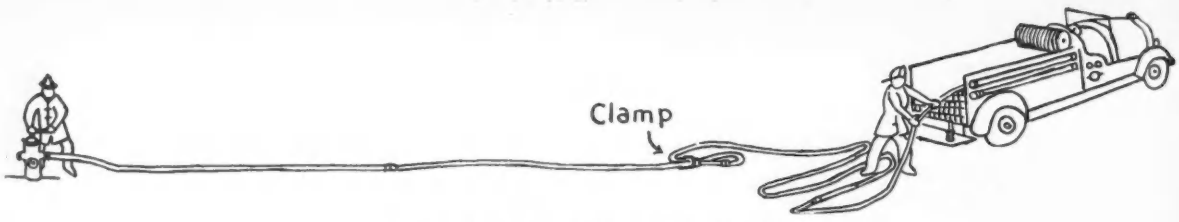
DIAPHONE HORN

**Operated by compressed air. Has great carrying power, distinctive tone and coding ability. A reserve supply of compressed air is automatically maintained.**

NOTE: *Your own public alarm may be utilized and automatically operated by the Vitaguard System.*

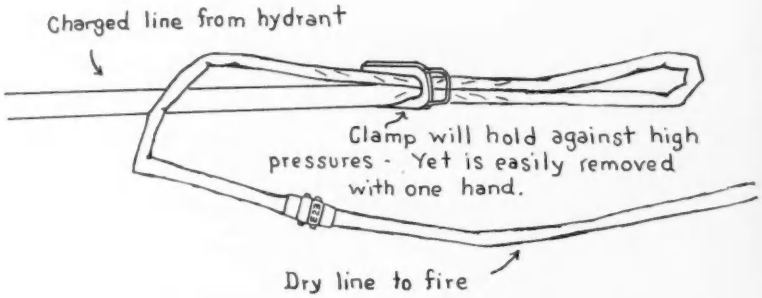
THE GAMEWELL COMPANY

Newton Upper Falls, Massachusetts




Using a hose clamp when making a hydrant

# Why Wait So Long for Water?

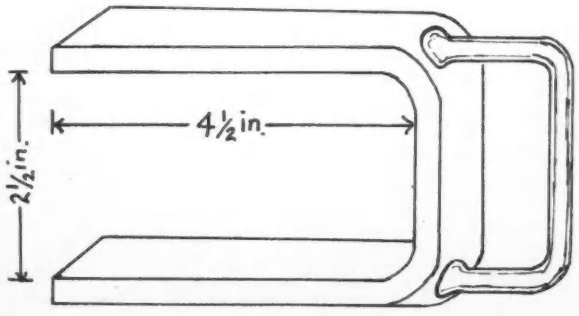



TIME has always been considered one of the essential ingredients for successful fire fighting. For many years fire departments have spent thousands of dollars on apparatus and alarm equipment that would speed up fire department response and fire-fighting operations. Yet many departments have overlooked the fact that for the cost of a few cents fire departments could cut the time required in getting water from a hydrant to the nozzle at almost every fire. This may be done by the expedient of a simple, easy to use, home-made hose clamp. By using the hose clamp water may be turned into the line just as soon as the hydrant connection is made. Thus the line is charged up to the point where the clamp is applied, usually near the rear of the hose truck and close to the front of the burning building. As soon as the nozzle is in position for use the clamp may be pulled free with one hand and water is immediately available.

Where a hose clamp is not used there is always the danger that the water may be turned on at the hydrant or pumper before the pipemen are ready. This is dangerous because hosemen may be thrown off balance and injured. The line once charged is no longer mobile and time may be lost in dragging the line to the desired point of operation. There have also been a number of occasions when no hose clamp was used, that water was turned on before the line leading from the hose body was broken. A glorious snarl of charged line in the hose body, that meant both delay and extra work, was the result.

Where long lines are being used as in residential and suburban areas not having adequate hydrant distribution, considerable time is lost in getting water from the hydrant where a hose clamp is not used. In the first place it takes a measurable amount of time for a long line to fill from a distant hydrant. Then unless the line is clamped the hydrant man must wait until he is sure that the hose crew is ready before he turns on the water. With the excitement and confusion usually found at fires and particularly where the hydrant is out of sight around a corner, a runner will have to be sent back from the hose crew with instructions to charge the line. If the crew is shorthanded this is an extra disadvantage. There is also the possibility where several lines are laid that the wrong line may be charged. This may be serious unless lines are clamped to prevent water from reaching the nozzle prematurely.

In effect, the use of a hose clamp saves two men for a shorthanded crew. The man making the hydrant is free to assist in fire fighting as soon as the water is turned on and there is no need to send another man back to the hydrant to call for water. As soon as the hydrant connection is made the hydrant man will follow the line to the fire, straightening out kinks and is ready to remove the clamp to charge the nozzle if this has not already been done.




The use of the simple home-made hose clamp is shown on this page. As soon as the apparatus laying out the hose stops at the fire a bight is taken in the hose and the clamp applied. The clamp will resist any pressure that may be applied on the line from the hydrant or from a pumper although it may be pulled off by use of the handle without difficulty. This type of clamp is not designed for shutting off pressure in a charged line. Numerous special hose clamps have been manufactured for this purpose. The unit shown may be made of 1-inch by ¼-inch strap iron shaped to the dimensions shown below. The handle is welded on. It has been suggested that hose crews obtain enough clamps for each regular hoseman to use but at least enough should be provided for every hose line that is to be used. It is obvious that unless the hose clamp is used regularly, each time a line is laid, there may be confusion from lines charged prematurely. This trouble will be overcome if the clamps are carried in a conspicuous place at the back of the apparatus and every man is given the simple instructions regarding their use.

●

## SPRAY NOZZLE TEST REPORT

THE National Board of Fire Underwriters, 87 John St., New York 7, has recently published a pamphlet *Characteristics of Water Spray Nozzles* (46 pages with illustrations), based upon tests made at Elmira, N. Y., on April 25, 26, and 27.

These tests include the operation of various types of fog and spray nozzles at pressures between 200 and 600 pounds. The nozzles were tested on fires in both flammable liquids and ordinary combustibles.

## A MILLION TONS OF WARSHIPS

A million tons of Naval might are shown in this picture of part of the first U. S. Navy war fleet to drop anchor in waters that were Japanese prior to the Pearl Harbor attack. This tremendous concentration of war vessels was anchored in formerly held enemy waters less than a week after the island's capture early this year.

# NATIONAL FOAM

## HELPS PROTECT THIS FLEET FROM FIRE

OFFICIAL U. S. NAVY PHOTOGRAPH

**Most of the millions of tons of the U. S. Naval might are protected against oil and other hazardous fires with National Foam Fire Fighting Equipment which have been adopted and are being extensively used by the U. S. Navy.**

**National Foam Fire Fighting Equipment has been used by most large oil refineries and other important industries for many years.**

### IN FIRE DEPARTMENT SERVICE

**National Foam System has equipment especially designed for the use of Fire Departments to meet all types of fire fighting requirements. Complete engineering service available.**

BACK THE ATTACK—*BUY WAR BONDS*

## NATIONAL FOAM SYSTEM, INC.

*Specializing in Foam Fire Protection*

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"COMMANDO"

PATENTS GRANTED AND PENDING

THE NEW PLASTIC
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A NEW DESIGN

The "COMMANDO" combines the best features of the regulation and drop brim styles, with new advantages distinctly its own. The skull, shaped to give a solid support for the front piece, eliminates the old "pocket" and gives greater clearance over the forehead. The embossed ribs give great structural strength without added weight, and will resist heavy blows without crushing. A new adaptation of the famous CAIRNS CUSHION LINING, with or without earlaps, permits easy removal for cleaning or renewal.

A NEW MATERIAL

FLINT-FLEX is a composition specially developed for this purpose — a hard, fracture-resisting material that deflects blows even from sharp-edged objects, yet has a "temper" or flexibility that prevents cracking. It is a non-conductor of heat and electricity, and is not affected by water or chemicals ordinarily encountered at fires.

*Write for Catalog No. 31E*

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FLINT TRADE MARK FLEX
HARDNESS TO RESIST BLOWS
FLEXIBILITY TO AVOID CRACKING
HELMETS
NEW YORK, N. Y.

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NEW YORK 3, N. Y.

# N. F. P. A. Volunteer Firemen's Section
# MEMBERSHIP REPORT

THE total number of companies in the N.F.P.A. Volunteer Firemen's Section this month is up to 1,098 with 14 new companies joining.

Membership in the section showed steady gain all through the summer. At the present time there are almost eleven hundred volunteer fire companies enrolled and more than 17,000 individual firemen receiving VOLUNTEER FIREMEN through the Section.

Members are urged to point out the advantages of membership in the Volunteer Firemen's Section at all firemen's conventions, fire schools, and fire prevention meetings.

The following fire companies are welcomed to membership this month:

Alta Fire Department, Alta, Iowa
Deerwood Fire Department, Deerwood, Minn.
Duluth Fire Dept., Duluth, Minn.
Kerkhoven Fire Department, Kerkhoven, Minn.
Brevent Park & Leonardo Fire Company, Leonardo, N. J.
North Haledon Fire Company No. 2, North Haledon, N. J.
Plant Fire Brigade, Wright Aeronautical Corporation, Patterson, N. J.
Franklin Square & Munson Fire District, Franklin Square, N. Y.
Tonkawa Fire Dept., Tonkawa, Okla.
Strathroy Fire Department, Strathroy, Ont.
Philadelphia Navy Yard, B. Platoon, Station No. 1, Philadelphia, Pa.
South Side Place Volunteer Fire Company, Houston, Texas
Jane Lew Volunteer Fire Department, Jane Lew, W. V.
Butler Volunteer Fire Department, Butler, Wis.

**MEMBERSHIP PLAN**

- Through the Volunteer Firemen's Section, fire companies may become members of the National Fire Protection Association. As a member fire company, the department receives at headquarters a set of all regular N.F.P.A. publications. This includes the Quarterly, the monthly News Letter, posters and bulletins.
- Each member fire company has the Volunteer Firemen magazine sent to the homes of ten men at no extra charge beyond the ten dollars annual dues paid by all associate members of the N.F.P.A. All other N.F.P.A. members pay ten dollars without the ten copies of Volunteer Firemen.
- If more than ten firemen want to receive Volunteer Firemen, an additional dollar should be sent for each extra fireman listed to receive the magazine. Individual subscriptions are not accepted from departments not members of the N.F.P.A.

**"C'mon, let me write mine!"**

Walter Hugh in *Collier's Weekly*

# BEHIND THIS DOOR

## Stands 40 Years of FIRE PROTECTIONEERING

Main Plant and General Office, Detroit.

The General Fire Truck Division, Detroit.

Aerial Division, Hamtramck.

The General Pacific Corp., Los Angeles.

In war and in peace, for more than 40 years, buyers of fire protection equipment have learned to say "if it's General it's dependable."

This is because the men and women of General Detroit, from top management to production line, are *fire protectioneers.* Their skill and extensive plant facilities enable them to produce fire extinguishers and fire fighting apparatus that are *engineered* to do the job of fighting fire quickly, safely, and economically.

Leaders of American industry who have bought and used General Detroit products know by actual experience what this means. The engineering research and proven production capacity of this forty year old firm are at your service in the fight to reduce and eventually eliminate the menace of fire loss.

Victory over fire is important too!

★ ★ ★

*The General Detroit Corp. manufactures a complete line of fire fighting equipment including CD/Fog Carbon Dioxide Fire Extinguishers. Fire can't breathe when CD/Fog goes into action! CD/Fog Carbon Dioxide Fire Extinguisher quickly, surely smothers the flame. Particularly efficient on gasoline, oil, electrical, paint, and chemical fires. Leaves no stain on clothing or premises. Write for descriptive literature.*

IF IT'S GENERAL IT'S DEPENDABLE

THE GENERAL DETROIT CORP.

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CHICAGO *Distributors in all principal cities* NEW YORK

West Coast Affiliate: The General Pacific Corp.

Seattle • LOS ANGELES • San Francisco

Vallejo, California, fire station. *Federal Works Agency*

# PUBLIC FIRE DEFENSE PROVIDED BY U. S. FEDERAL WORKS AGENCY

**Prepared for VOLUNTEER FIREMEN by Harry Hewes, Field Representative Office of Information, Federal Works Agency.**

MOUNTING fire hazards marched in the wake of expanding war production. Boom conditions turned quiet villages into crowded, bustling towns; industrial cities bulged beyond the capacity of utilities and services, adequate enough a few months before, to provide a safe and secure life for their citizens.

Housing projects arose over corn fields and pine barrens to shelter the families of war workers and military personnel where shifts in the historic population movements swirled and steadied.

Fire damage in any of these inadequately protected communities might impede the war effort dangerously.

And so, early in the defense program which preceded Pearl Harbor and in the feverish, accelerated war effort that followed that December Sunday of three years ago, distressed communities turned to the Federal government for assistance. It has built hundreds of housing communities, schools and hospitals, sewer and water mains, and large numbers of the plants for war production, and under the Lanham Act Congress has provided funds for the "defense, health and security" of life in the war-impacted areas. Facilities for fire protection were held to come properly within the meaning of the Act when the applicant lacked means to meet the war-induced impact unaided.

The Federal Works Agency, charged by Congress with the responsibility for meeting these community needs and the administration of the money made available under the Lanham Act, has processed, and the President has approved, more than 140 war public works projects for fire protection. These projects include construction of fire stations, purchase of pumper trucks and other equipment with hose and appurtenances; installation of fire hydrants and fire alarm systems, and the extension of many miles of water mains.

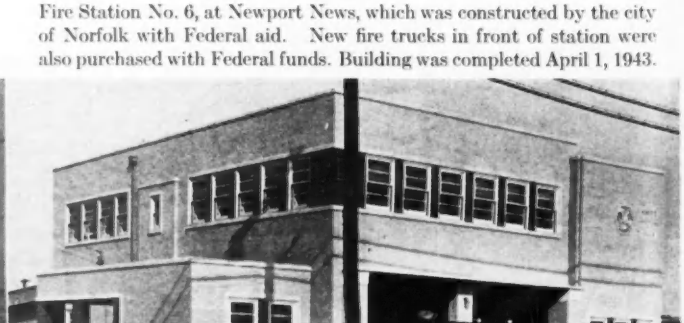
Fire station projects have been approved for FWA assistance in Vallejo, San Diego, Vernon, Richmond, Burbank, Oceanside and San Pablo, Calif.; Prichard, Ala.; Bridgeport, Conn.; Savannah and Brunswick, Ga.; Kittery and South Portland, Maine; Sidney, N. J.; Wilmington, N. C.; Euclid and Akron, Ohio; Lawton, Okla.; North Kingstown, R. I.; Texas City, Orange and Kingsville, Texas; Ogden, Utah; Hampton, Newport News and Portsmouth, Va.; and in Arlington County, adjacent to Washington, D. C.; Ketchikan, Alaska, in Seattle and Bremerton, Wash.

Bremerton is a typical war-impacted community, and more than $400,000 in FWA funds has been approved for its protection from fire loss. With a population of 15,000 four years ago between 75,000 and 100,000 persons are now domiciled in this town which serves large naval installations and war industry.

Located on a peninsula, Bremerton is isolated from other populated districts bordering Puget Sound with access only by a one-hour ferry ride or a single highway approach from the West. The community is entirely on its own resources in matters

Columbia, S. C. Shandon Fire Station. Project included building only.
*Federal Works Agency*

Fire Station No. 6, at Newport News, which was constructed by the city of Norfolk with Federal aid. New fire trucks in front of station were also purchased with Federal funds. Building was completed April 1, 1943.



*Federal Works Agency*

Arlington Co., Va. This station provides housing for one pumper and living quarters for two full-time firemen. The apparatus floor is concrete; all floors in living areas are covered with asphalt tile. Exterior architectural treatment is simple and in close conformity with the general design of the nearby Fairlington development.

of emergency where quick action is an important consideration. Shortly after FWA delivered two Ford pumpers, a serious fire destroyed three duration dormitories nearing completion to house 316 men and a fourth dormitory occupied by 67 men was burned to the ground. Had not these new pumpers been available, the Mayor said, it is quite likely the fire would have proved disastrous. Two new fire stations will increase facilities for protection in Bremerton, and each will be built with quarters for police.

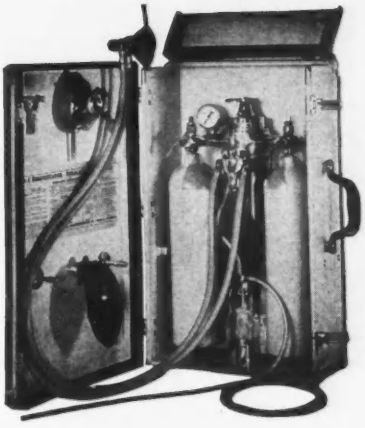
Fire equipment projects made available with FWA allotments have been approved for Gadsden, Montgomery, Mobile, Dothan, Talladega and Childersburg, Ala.; Bauxite, Ark.; Richmond, Santa Monica, Solano County, San Diego and North Vallejo, Calif.; New London, East Hartford, Bridgeport and Groton, Conn.; Panama City, Apalachicola and Sebring, Fla.; Port Wentworth, Brunswick and Valdosta, Ga.; Crotty, Ill.; Kingsford Heights, Ind.; Wichita, Kansas; New Orleans, La.; Bath and South Portland, Maine; St. Mary's County, Md.; Quincy and Lawrence, Mass.; Detroit, Gratiot Township and Willow Run in the Detroit area, Mich.; Hattiesburg, Miss.; Waynesville, Mo.; Portsmouth, N. H.; Sidney, N. Y.; Jacksonville, N. C.; Sandusky, Akron and Windham, Ohio; Portland, Ore.; North Kingstown, R. I.; North Charleston and Charleston, S. C.; Chattanooga, Tenn.; Houston (fire alarm equipment), Freeport, Velasco, Garland, Galveston, Hoops and Fort Worth, Texas; Ogden, Clearfield and Laytona Town, Utah; Norfolk and Norfolk County, Newport News, Portsmouth, Warwick County, and Hilton Village, Va.; Tacoma, Vancouver, Spokane, Renton, Pasco, Walla Walla, Port Orchard, Kirkland and Bremerton, Wash.; Superior, Wis.; Cheyenne, Wyo.; Kodiak, Ketchikan and Seward, Alaska, and an island-wide fire and sanitary equipment program in the Virgin Islands.


# E & J RESUSCITATORS THE NO. 1 LIFE SAVERS

★

**The huge number of lives saved by these ingenious automatic breathing machines has rightfully earned for them the reputation of "America's No. 1 Life Savers."**

★



## E & Js ARE PACKED FULL OF SUPERIOR LIFE SAVING FEATURES

**The features which save lives are all in the E & J. They are all there and have the superior qualities and ingenuity which have made E & J Resuscitators the most widely used instrument for treating desperate cases of Asphyxia. Check with the leading Hospitals, Industrials and Fire Department Rescue Squads and you will find that E & J is the preferred instrument where merit is the deciding factor.**

WE INVITE YOUR THOROUGH INVESTIGATION OF THE E & J RESUSCITATOR INHALATOR AND ASPIRATOR.

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# EMERSON RESUSCITATOR

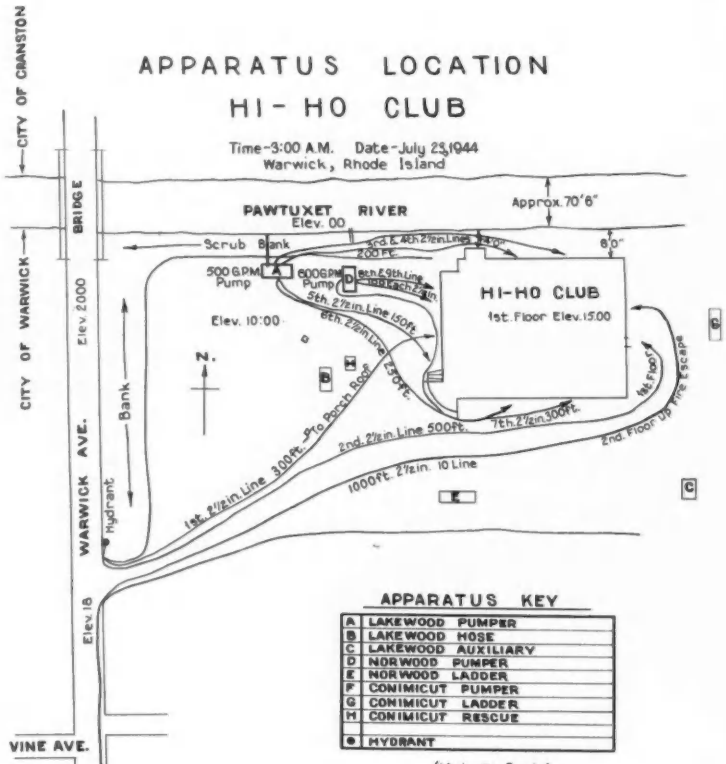
**Again at the convention of the International Association of Fire Chiefs in Grand Rapids, the Emerson Resuscitator, on its fourth birthday, scored a real victory of popularity— Surely no other automatic resuscitator ever made such a record in so short a time.**

•

**J. H. EMERSON CO.**
24 Cottage Park Ave.,
Cambridge, Mass.
Representatives in Principal Cities


## HI-HO NIGHT CLUB FIRE—WARWICK, RHODE ISLAND

CHIEF THOMAS E. DUCKWORTH reports this fire that occurred at 3 P.M., July 23rd. The interesting feature of the fire was that the volunteer department of Warwick fought it exactly according to the prearranged plan, illustrated below. The fire gained so much headway that the entire interior was involved by the time the firemen arrived. Loss: $27,000.

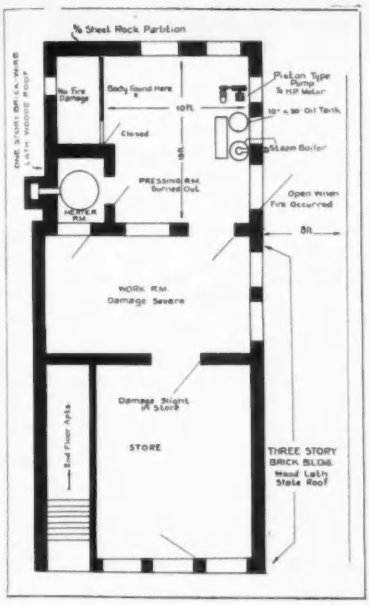



## TAILORING COMPANY EXPLOSION AND FIRE

CHIEF DAVID G. STUART, of the Ventnor City, N. J., fire department, reports an explosion in a tailor shop that killed one man, severely burned another, and destroyed a large amount of clothing.

"On August 22, at 1:31 P.M. a phone call and box were simultaneously received for a fire in a brick and frame building, the first floor of which housed the Portland Tailoring Company. The second and third floors contained several apartments.

"Upon arrival at the scene, we found it was located in the business district and




within three squares of Fire Headquarters. Fire was coming out of the door and windows of the workroom to such an extent that it had ignited curtains in the second floor apartment of the next building which was separated from the workroom by an eight-foot driveway.

"Almost immediately upon arrival we were informed that a man had been trapped in the workroom by the explosion. Repeated attempts to enter this room during the first few minutes of the fire proved futile, but by using a fog covering a man was able to get in and locate the trapped man, who was brought out and placed in the summoned ambulance within five minutes of the time the alarm was received. This man died four hours later from burns.

"The fire was fought with a 1-inch booster line, two 1½-inch lines all equipped with Elkhart Mystery Nozzles, backed up with one 2½-inch line which was not brought into play.

"Investigation after the fire had been brought under control proved that the steam for the pressing machine was generated by a burner using kerosene under pressure for fuel. The kerosene was supplied from a tank ten by thirty inches and constructed of twelve gauge steel, with pressure being supplied by a piston type compressor driven by an electric motor, without any type of pressure switch. The tank was equipped with a pressure gauge but no safety device to relieve or prevent excessive pressure. The trouble in this case lay in the fact that the motor had been started and forgotten, allowing pressure to be built up until the tank ruptured (see illustrations), spraying the entire room with oil which quickly ignited.

"Since this fire, a thorough investigation of all cleaning and pressing shops has been made, and in several other establishments we find this same equipment in use."

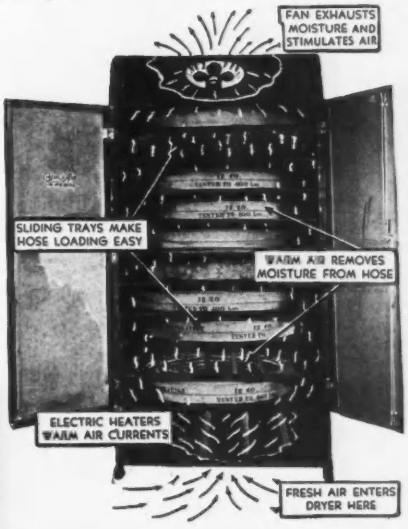

# Faster Hose-Drying with

CIRCUL-AIR THE AIR CONDITIONING FIRE HOSE DRYER

**Electrically-operated, the CIRCUL-AIR dries hose in a very few hours — 25 to 50 times faster than a tower or a rack. By prolonging the life of hose now in service and, by quick drying, lessening the need for large hose reserve for "reloads" while wet hose is drying, CIRCUL-AIR helps to build up the Nation's rubber stock pile.**

***Preferred by Fire Chiefs because it:***

- **Prevents mildew and rot**
- **Eliminates towers**
- **Is easier to use**
- **Reduces hose stretch**
- **Improves building design**
- **Air-conditions as it dries**
- **Saves space, work, time and critical materials**
- **Saves drying time**


FAN EXHAUSTS MOISTURE AND STIMULATES AIR
SLIDING TRAYS MAKE HOSE LOADING EASY
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ELECTRIC HEATERS WARM AIR CURRENTS
FRESH AIR ENTERS DRYER HERE

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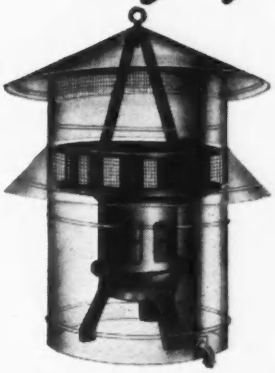
# A Size for Every Need—



*FEDERAL Vertical Sirens are built with ample overload capacity.*

## 2 to 7½ HP.
## FEDERAL VERTICAL SIRENS

FEDERAL Vertical Sirens are available in capacities ranging from 2 to 7½ HP.—a size to meet every requirement. Each size is designed and constructed for long dependable service—the accomplishment of 40 years of FEDERAL research and engineering.

Signals are powerful and audible over a large area. Sound radiation is equal in all directions. Housings are weather-proof. And, all parts are ruggedly, yet accurately constructed to give signals when they are needed.

FEDERAL Vertical Sirens and controls are dependable. They are standard equipment in many localities.

Permission to purchase on WPB-1319 can be obtained at your nearest WPB office.

ARMY E NAVY

***WRITE FOR BULLETIN***

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**SIREN HEADQUARTERS**
8717 So. State Street Chicago 19. Illinois

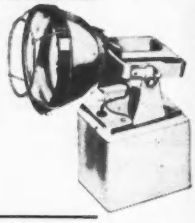
# MASTER★LIGHTS FOR EVERY NEED

**The best in colored oscillating lights for your motor equipment.**

**Type 06** ← **Clears Your Side of Street**

**Featherweight, Mile Range, Rechargeable Hand Searchlights and Floodlights.**

**Type WS** → **Uses Small Rechargeable Battery Mile Range**

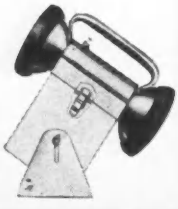


**Type Dul** ← **Emergency Floodlight For Theatres, Road Houses, etc.**

**Types F5 and Super-6** → **Dry and Rechargeable Units. ¾ Mile Range**

**Type T** ← **Roof mounted Officers Searchlight 360°**

**Type T&T** → **Two-Way. Hand and Red Warning Light**



**CARPENTER MFG. CO.**
"MASTER ★ LIGHT ★ MAKERS"
168 SIDNEY ST.,
CAMBRIDGE 39, MASS.

**Supervisors J. L. Brown, H. Runkle, R. Selkirk, shown with the forest fire fighting equipment described below.**

# Schoharie County Forest Fire Service

**Described by Director John L. Brown**

FROM Cobleskill, N. Y., comes a practical plan for a fire-fighting unit of real value for rural and forest work. The department plans to use it at fires where wells provide the only water supply. In the past the wells had often gone dry just when most needed, and the building was lost before pumping equipment could be set up over another.

John L. Brown, Director of the Schoharie County Forest Fire Service, describes their new unit.

"The Schoharie County Board of Supervisors some months ago voted to install a forest fire fighting unit as a supplement to the state owned equipment scattered throughout the county. This action was taken in the light of the fact that there are 110,000 acres of privately owned forest land, and 27,000 acres of state owned land in the county. This land, according to the U. S. Forest Service, has a valuation of $3,000,000.

"The committee appointed to purchase the equipment and set up the service were supervisors, R. Selkirk, H. Runkle and N. Miller. The sum of $3,000 was appropriated for this purpose. Rev. John L. Brown, of Cobleskill, a fire warden with experience in three states, was appointed director.

"The equipment is transported on the trailer pictured above, which was designed by Mr. Brown who also supervised its construction. It carries the following equipment:

1 Pacific Marine type pump, capacity 60 G.P.M. at 100 lbs. pump pressure and 37 G.P.M. at 200 lbs. pressure.

1 pack board for carrying same.

2,000 feet of linen forestry hose in 5 bags with pack boards.

1,000 feet of single jacket rubber lined hose (all hose 1½-inch).

20 feet of suction hose with strainer.

1 70-gallon collapsible relay tank.

2 nozzles with changeable tips and 1 fog nozzle.

1 pressure relief valve.

1 high pressure Wye connection.

1 water thief for filling Indian pumps.

1 2-cell electric lantern.

Collection of adapters, spanners, wrenches, and washers.

3 water pails, 6 ratan brooms, 6 rakes, 1 cross-cut saw, 2 shovels, 2 axes, 3 5-gallon Indian pumps, and 1 5-gallon gas can.

"This equipment is kept in Cobleskill under the care of the director. In addition to being a forest fire unit, it is available to all fire departments, towns, and villages throughout the county. It is expected that for all calls, other than forest fire, the group calling will take care of the cost of operation plus mileage. The equipment has already proved its value in several hours of fire service.

"On one forest fire, the Schoharie County Forest Fire Service used the full 3,000 feet of hose and found that its pump lived up their new service.

"One of the calls on which this equipment proved its worth was the train wreck at Central Bridge where all the regular fire department equipment was needed to keep the fire confined and the forest equipment set up and covered a large set of farm buildings for over an hour." (VOLUNTEER FIREMEN, August 1944, p. 8.)

MODERN Fire Protection!
SUB-ZERO GAS THAT
KILLS FIRE IN SECONDS without damage
Specifically, that swift, fire-smothering gas is carbon dioxide, the fastest non-damaging fire extinguishing agent known to man. Back of the gas is C-O-TWO Modern Fire Equipment which harnesses and controls the tremendous power of the sub-zero gas. Rugged equipment built for particular fire hazards, it is used to extinguish electrical, oil, gasoline, paint and flammable chemical fires. Whether your fire protection problem indicates smoke detecting apparatus, built-in-systems to protect one or more areas, portables or wheeled units, C-O-TWO Fire Equipment will give you the most modern carbon dioxide fire protection.
C-O-TWO Kills Fire—Saves Lives—It's Safer—It's Faster—It's Modern.
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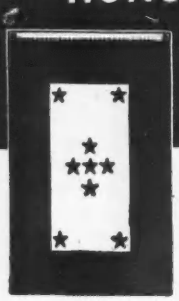
NEWARK NEW JERSEY

HONOR YOUR SERVICE MEN



Honor your fellow-firemen now serving with the armed forces, by displaying this official

SERVICE FLAG

*Blue stars, white panel, field of red. Send for catalogue.*

One star for each one in service. Available in any size or material desired. Send for Free illustrated catalogue and price list today.

*Permanent*
**ROLL of HONOR**

A permanent plaque, with individual names in silver on gold-bordered permanent name plates. Beautiful walnut plaque with eagle and victory torches. Write for price list today.

U. S. and Allied Flags in all sizes. Write for prices.

**REGALIA MFG. CO.**
Dept. 82, Rock Island, Ill.



THE *New* WHEAT *Rechargeable Spotlight*

MODEL 158

2500 FOOT BEAM
25000 CANDLE POWER
1000 HOURS OPERATION

Critical Materials Reduced to a Minimum to insure Availability

**FEATURES:**

- ★ Positive "non-spill" Construction
- ★ Less expensive Operation than dry cells
- ★ Free use of Hands. Light carries conveniently on Shoulder Strap
- ★ Weighs only 92 ozs. complete
- ★ Simple to Charge or Water. No need to take Lamp apart
- ★ Light can be Focused and Directed as Desired

WRITE FOR COMPLETE DETAILS

KOEHLER MANUFACTURING COMPANY, INC.
MARLBORO, MASSACHUSETTS, U.S.A.


# Fire Grounds Communications System for Small Departments

**By E. W. Parker, Coleman, Texas, Fire Department**

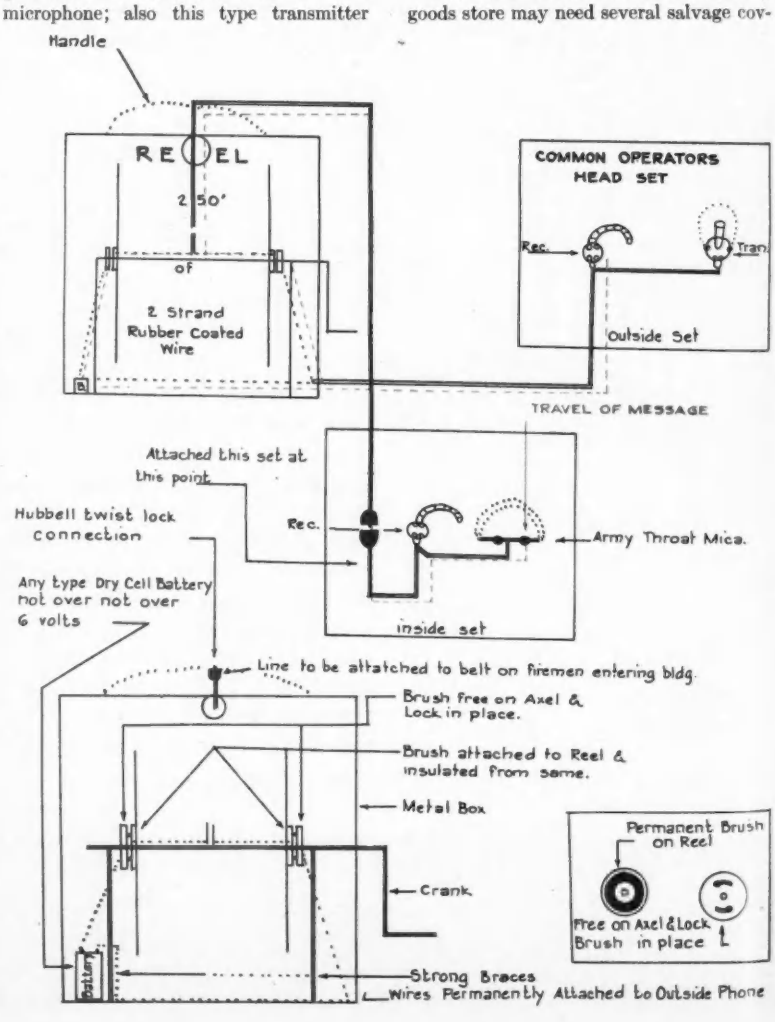
THE Coleman, Texas, Fire Department has developed a small-town Walkie-Talkie that serves towns affected by the new Federal ruling. (See VOLUNTEER FIREMEN, August 1944, p. 12). The set is described as easily made, the cost not exceeding fifteen dollars. The cable interferes very little with the fireman's work and can be worn with the mask without interference from phone or mask.

Mr. Parker, driver for the Coleman Fire Department, states some of the features of this type of communication.

"This set was designed to improve directions for fighting fires. Since its design it has developed several other uses; such as rescue of trapped people, especially firemen. We find new uses for it as we go along.

"As for the fires; it is very easy to put this set on any fireman, with or without gas mask. This is the reason for the throat microphone; also this type transmitter eliminates all other noises. The fireman has his hands free at all times and should he need to leave a building a different way than he entered he is free to do so. All he has to do is to unlock his connection to be free from the wire. The man on the outside of the building can reel it back. With this set he can report where the fire is starting, the direction which it is trying to spread and exactly what equipment is needed to extinguish the fire. The man on the outside can give the orders. A man may be on an adjoining building with very little knowledge of what his stream is doing. Upon reports from the man inside the building, he can direct his stream more accurately. Also, the men on the nozzles can ask for more or less pressure, whichever is needed. The man in the building can communicate with the outside, regardless of his distance from the truck.

"The man on the inside of a large dry goods store may need several salvage cov-



ers or any number of small tools. With this set he can order equipment sent in, saving time and manpower.

"One of the main features of the set, we think, is that should we, on the outside, see that the building is in a dangerous condition, we can order the men on the inside out, immediately, whereas they might be too busy to notice their danger. If a man wearing this set should be overcome by smoke or lose his way, he can either be rescued or return by following his cable.

"This communication equipment is all water proof. It is also very inexpensive. Several of these sets can be hooked up at the reel together, if so desired. Any telephone exchange will give you a few old discarded sets that are still in good working condition. You can make the rest except the throat microphone, and this you will have to buy. If you do not want to make the reel, you can drop me a card and I will give you the name and number of the factory which makes this reel. The wire cable is very cheap. Any electrician can furnish you with enough for your use. A switch is not necessary, since the circuit is not complete until the connections are made ready for use.

●

## Gasoline Truck Fire

(*Continued from page 12*)

Jefferson Township Volunteer Fire Companies arrived, the fire was fairly well under control. The volunteer companies from New Freeport and Rices Landing had arrived but it was not necessary to use them. After extinguishing all the fire in the surrounding buildings, several streams were concentrated on the truck where vapors were burning from the vents of the tank, and thus put out the flames.

The loss was approximately $25,000, exclusive of the truck, electric lines, and the automobiles which burned. The frame dwelling on the southwest corner of Richhill and High Streets was completely destroyed. The roof and all woodwork in the front of the brick home next to this was destroyed but it fortunately was not occupied at the time of the fire. Immediately west of the brick house, a frame building was slightly damaged. The weather boarding and roof of the house on the northwest corner, together with windows, were damaged, but the contents were undisturbed.

Approximately 1,200 gallons of gasoline were found to remain in the tank. It is reported that it had been loaded at a nearby compressing station and was enroute to Washington, Pa.

There were no fatalities and no injuries of any kind. However, the property loss involved very forcibly demonstrated the need of a revised routing for such vehicles in order that never again might the entire heart of the town be exposed to such devastation.


# Midwestern Combination Suit

*Rubber or Canvas*

**Standard in many Municipal Dept's**

*All Over America*

You can buy either the coat or the pants separately or together. The coat is a highly serviceable garment as a result of rugged and superior quality throughout. Flexible elastic inner sleeve for wrist. Adjustable collar strap, detachable wool lining, Midwestern safety snaps, 2 outside pockets, 6-inch storm flap, and many other good features.

## Bunker Pants

- Lining held by snap buttons
- Eight suspender buttons
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- Wool Lining
- Reinforced adjustable belt
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- Reinforced by rivets

See your local Midwestern distributor for prices and literature, or write the factory.

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MACKINAW, ILLINOIS

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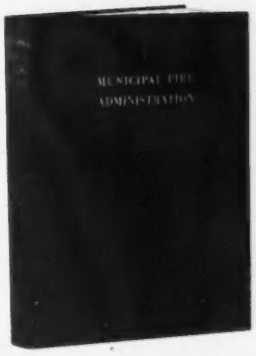
# MUNICIPAL FIRE ADMINISTRATION




**The text is furnished as part of the $35 fee covering the complete cost to a student of the course. This fee includes the review and correction of lesson papers. In no way can men studying for promotion in a fire department receive a more complete understanding of fire department operations and administrative problems.**

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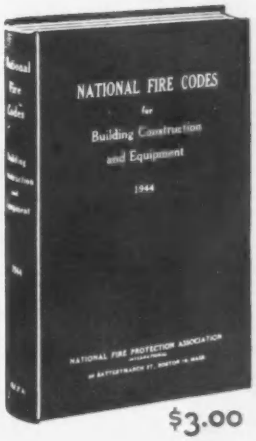
**512 pages — Illustrated — Bound in red cloth**




**$3.00** Postpaid

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**Order Now!**

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**Fyr-Fyter**


# MANUFACTURERS' ANNOUNCEMENTS

ROBERT C. "BOB" ANDERSON, Vice President of Buckeye Iron & Brass Works of Dayton, Ohio, died suddenly at his home on August 27th. Mr. Anderson was one of Dayton's most prominent industrialists and was well known among the fire service. In addition to his manufacturing interests which brought him into extensive contact with the fire service, Mr. Anderson was well known for his wealth of stories and his ability as an amateur magician.

•

A NEW 25-pound wheeled carbon dioxide fire extinguisher has been placed on the market by Randolph Laboratories, Inc., of Chicago. The new model, illustrated below, features an exclusive palm-trigger valve mounted on the steel handlebar of the extinguisher.

By grasping the handlebar the operator can move the unit and press the release button with one hand. Release of pressure on the palm-trigger automatically shuts off the flow of carbon dioxide. According to the manufacturer the extinguisher has undergone testing by Underwriters Laboratories, Inc. For full details we suggest that you write to Randolph Laboratories, Inc., 8 East Kinzie St., Chicago 11, Ill.

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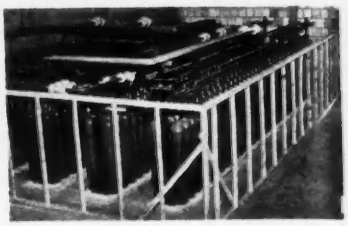
WHAT is believed to be the largest carbon dioxide fire protection system in the world has been installed at the Pine Bluff Arsenal, Arkansas, by the C-O-Two Fire Equipment Company of Newark, New Jersey. The system consists of 273



cylinders of high-pressure carbon dioxide with a total capacity of more than 13½ tons of fire extinguishing gas. The equipment protects bomb loading, reactor, and storage operation spaces at the Arsenal's incendiary bomb loading plant.

•

NATIONAL SCIENTIFIC PRODUCTS COMPANY of Chicago has recently announced a portable electric megaphone which may prove valuable to fire department officers in directing their men during fire fighting operations. This new device is said to project intelligible speech under favorable conditions up to one-half mile distance. Construction details include a plastic megaphone with a built-in waterproof microphone. This is connected to a small waterproof cabinet, carried by a shoulder sling, containing batteries and amplifying equipment. The manufacturer states that power is consumed only during actual transmission of voice and that batteries provide forty hours of efficient operation and still retain seventy per cent of their original voltages. Further details are available by writing to National Scientific Products Co., 5013-25 North Kedzie Ave., Chicago 25, Ill.


**« FOR SALE »**

**American-LaFrance 1000-g.p.m. high pressure Triple Combination Pumper.**

**City Service Single Bank Ladder Truck with 4-cylinder American-LaFrance motor.**

**75-Foot Aerial Ladder Truck with American-LaFrance tractor.**

**All of this equipment is now in service. For further details write:**

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# MORE PROOF!

# FMC HIGH-PRESSURE FOG EFFECTIVELY SMOTHERS FLAME

## Kent County, Michigan, Fire Department Makes Remarkable Record

### 201 FIRE RUNS—PROPERTY SAVED, $226,985.00

The first report of the Kent County Fire Department shows how good the FMC Fog Fire Fighter really is. And — it proves that a rural, volunteer fire organization can be operated on an efficient basis.

The Kent County organization was established by a special act of the Legislature and organized with the help of Extension Service. Surveys were made. Meetings were held. And hundreds of volunteer firemen responded.

Then — *five* FMC High-Pressure Fog Fire Fighters were purchased from the John Bean Mfg. Co.

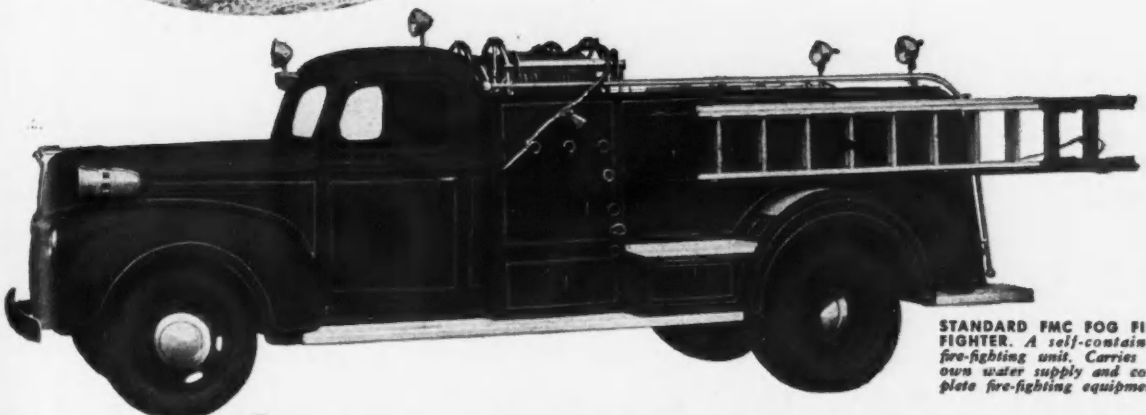
*Look at the Record!* 201 Rural Runs! Property on Fire Saved—$226,985! Total losses 'way below rural average—only 11!

**FIGHT YOUR FIRES THIS MODERN WAY**

Fires can be put out faster and with less water with FMC High-Pressure Fog. Why? Because the high pressure gives you a combination of finely-atomized water and high velocity—just what you need to *blast, cool* and *smother* flame.

Investigate! Get the facts about this new and revolutionary fire-fighting technique. Right now—the Armed Forces are taking most of the production of FMC High-Pressure Fog Fire Fighters. But—you should be ready to modernize the moment civilian needs can be met. Start planning — now!

This farm house is typical of the rural structures to be found in Kent County. Many are located far away from adequate water supplies—far away from Low-Pressure Pumpers. As the FMC High-Pressure Fog Fire Fighter travels fast and carries its own water supply, it knocks down a fire in a very few minutes.



STANDARD FMC FOG FIRE FIGHTER. *A self-contained fire-fighting unit. Carries its own water supply and complete fire-fighting equipment.*

## FMC *Original* HIGH-PRESSURE FOG FIRE FIGHTER

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## 600 Pounds Pressure or 200 GPM

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Adaptable to your Present Pumper, Service Truck or Utility Car

600 pounds pressure for the fires that need fog . . . or 200 gallons per minute for conventional 2½" line at regular pressures . . . especially suited for booster or leader line service. That's the brief story of this remarkable new Barton-American Dual Purpose Pump. You don't need to buy an expensive piece of apparatus to give your community such protection. The Barton-American GK-100 is engineered to mount on the front of your present pumper, service truck, or utility car Send for complete information on the GK-100 today.

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# INDIAN

## Clear Water **FIRE PUMPS**

## *will stop a Fire faster than "Rain Dancers"*

*Bettman Archive Print*

### INDIAN DANCERS BRING RAIN; PUT OUT FOREST FIRE

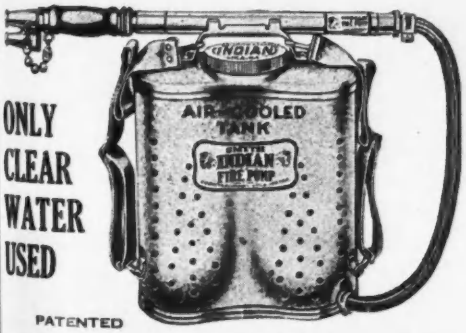
Taos, N. M.—(Special)—Thanks to the ingenuity of the Indian rain dancers, forest service officials now have the fire situation well in hand in New Mexico's 8½ million acres of timber lands.

When flames broke out the other day in the Carson National forest, officials called in a gang of Taos Indians to help quell it. After three days of sweltering work, without much headway being made, the medicine men drew the tribesmen aside, held a pow-pow, and reached a decision. A rain dance was the solution.

Out came the dance regalia. Tomtoms throbbed, the chanters raised their voices in singsong supplication, feet thudded against the parched earth. To the surprise of the white men, a downpour followed.

The not-so-surprised Indians packed up their regalia, along with their shovels and axes, and returned to their Taos pueblo. The fire was out.

*Actual reproduction of a newspaper clipping which belongs in Ripley's "Believe It or Not" column.*

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*You will find* **INDIAN FIRE PUMPS** *just the outfit you need for putting out fires in leaves and grass this fall. Big tank holds 5 gals. of water. No chemicals needed.* **Order now.**

There is no hocus-pocus connected with the quick action way **INDIAN FIRE PUMPS** do a job of fire fighting. Put your trust in these great, portable extinguishers that use only clear water. You will find a use for them on practically every call. With 5-gallon tank slung on his back a fireman can get around quickly — arms are left free for climbing ladders, etc.

### *Depend on* **INDIAN FIRE PUMPS** *for Inside as well as Outside Fires!*

Fire departments everywhere are using their **INDIAN FIRE PUMPS** on room, rubbish, roof, building and partition fires. Seldom is it necessary to lay hose when you go into action soon enough with an **INDIAN.** Catalog tells all about these famous pumps. Write for a copy. It includes many testimonials.

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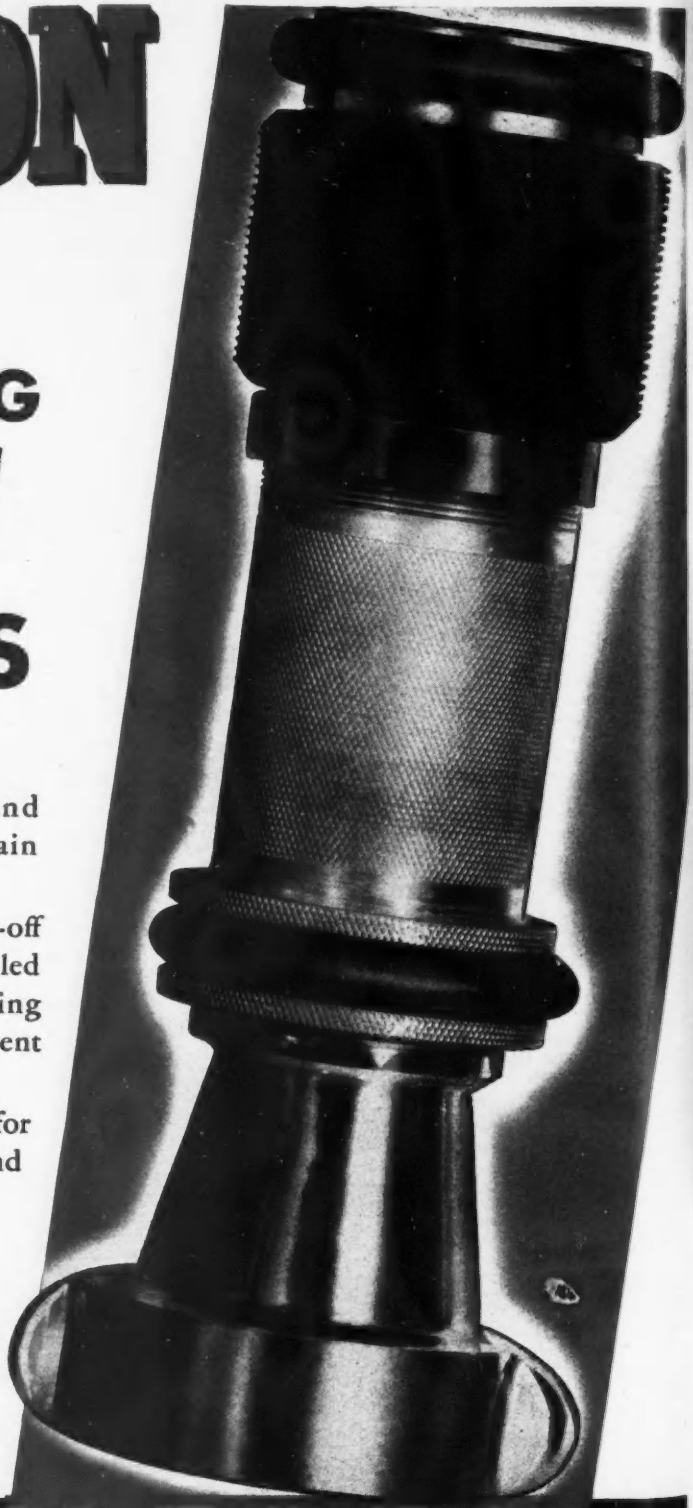
Fire & Mine Supply Co., 2703-4th Avenue South, Seattle, Washington — The Oswald Co., Klamath Falls, Oregon

# AKRON

## CONTROLLING STREAM *and* SHUT-OFF NOZZLES



Conserves the water supply and diminishes water damage—a main objective of all fire departments.

In addition to the instant shut-off feature, stream sizes can be controlled and varied up to 1¼" eliminating the necessity of purchasing different discharge tips.

Ruggedly constructed. Made for direct connection to 2½", 1½" and 1¼" hose lines.

**AKRON BRASS MFG. COMPANY, INC.**
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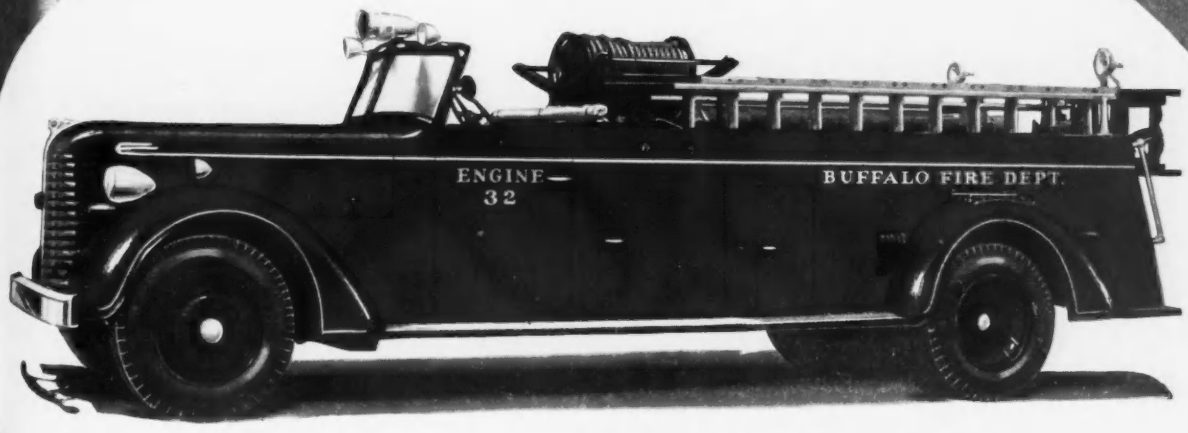
# AKRON BRASS
## FIRE FIGHTING EQUIPMENT

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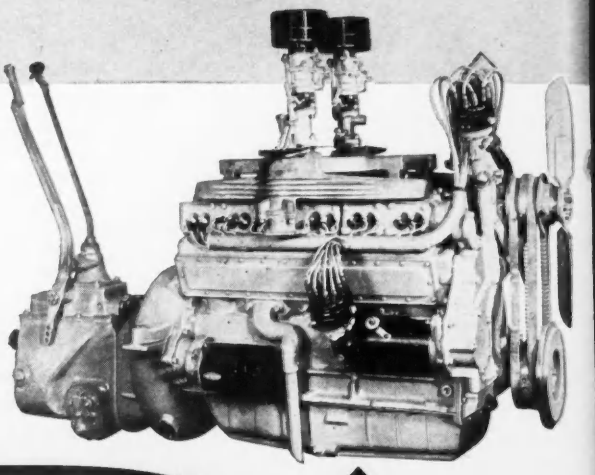

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The CENTRAFLOW pump, built by AMERICAN-LAFRANCE exclusively for fire service. Bronze pump housings are now furnished to provide all the pre-war features for long life.

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